



SEQUENCE LISTING

<110> Tozer, Eileen
Zhang, Feiyu
Abulencia, Carl
Frey, Gerhard
Parra-Gessert, Lilian

<120> Fluorescent Proteins, Nucleic Acids Encoding Them and Methods for Making and Using Them

<130> 564462005300

<140> 10/624,909

<141> 2003-07-21

<160> 198

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 684

<212> DNA

<213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 1

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accaatttcg	ttaagcttgt	ggttaccagg	ggtggacctt	tgccatttgg	ttggcacatt	180
ttgtcgccac	aatttcagta	tggaacaag	acgtttgtca	gctaccctag	agacataccc	240
gattatataa	agcagtcatt	tcctgagggc	tttaccatgg	aacggatcat	gaccttcgaa	300
gacggtggcg	tgtgttgtat	caccagtgat	atcagtttga	aaagcaacaa	ctgtttcttc	360
aacgacatca	agttcactgg	catgaacttt	cctccaaatg	gatctgttgt	gcagaagaag	420
acgataggct	gggaaccag	cactgagcgt	ttgtatctgc	gtgacggggg	gctgacagga	480
gacattgata	agacactgaa	gctcagcgga	ggtggtcatt	acacatgcgc	ctttaaact	540
atttacaggt	cgaagaagaa	cttgacgctg	cctgattgcc	tttactatgt	tgacacccaa	600
cttgatataa	ggaagttcga	cgaaaattac	atcaacgttg	agcaggatga	aattgctact	660
gcacgccacc	atgggcttaa	ataa				684

<210> 2

<211> 227

<212> PRT

<213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 2

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His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Glu	Ile	Glu	Gly	Glu
			20					25						30	
Gly	His	Gly	Lys	Pro	Tyr	Ala	Gly	Thr	Asn	Phe	Val	Lys	Leu	Val	Val

Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
 1 5 10 15
 His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
 20 25 30
 Gly His Gly Lys Pro Tyr Ala Gly Thr Asn Phe Val Lys Leu Val Val
 35 40 45
 Thr Lys Gly Gly Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Gln
 50 55 60
 Phe Gln Tyr Gly Asn Lys Thr Phe Val Ser Tyr Pro Arg Asp Ile Pro
 65 70 75 80
 Asp Tyr Ile Lys Gln Ser Phe Pro Glu Gly Phe Thr Trp Val Arg Ile
 85 90 95
 Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
 100 105 110
 Leu Lys Ser Asn Asn Cys Phe Phe Asn Asp Ile Lys Phe Thr Gly Met
 115 120 125
 Asn Phe Pro Pro Asn Gly Pro Val Val Gln Lys Lys Thr Ile Gly Trp
 130 135 140
 Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly
 145 150 155 160
 Asp Ile Asp Lys Thr Leu Lys Leu Ser Gly Gly Gly His Tyr Thr Cys
 165 170 175
 Ala Phe Lys Thr Ile Tyr Arg Ser Lys Lys Asn Leu Thr Leu Pro Asp
 180 185 190
 Cys Phe Tyr Tyr Val Asp Thr Lys Leu Asp Ile Arg Lys Phe Asp Glu
 195 200 205
 Asn Tyr Ile Asn Val Glu Gln Asp Glu Ile Ala Thr Ala Arg His His
 210 215 220
 Gly Leu Lys
 225

<210> 5
 <211> 684
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 5
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 accaatttcg ttaagcttgt ggttaccaag ggtggacctt tgccatttgg ttggcacatt 180
 ttgtcgccac aatttcagta tggaacaag acgtttgtca gctaccctag agacataccc 240
 gattatataa agcagtcatt tcctgagggc ttacatggg aacggatcat gacctttgaa 300
 gacgggtggc tgtgttgtat caccagtgt atcagtttga aaagcaacaa ctgtttcttc 360
 aacgacatca agttcactgg catgaacttt cctccaaatg gacctgttgt gcagaagaag 420
 acgataggct gggaaccag cactgagcgt ttgtatctgc gtgacggggt gctgacagga 480
 gacattgata agacactgaa gctcagcgga ggtggtcatt acacatgcgc ctttaaaact 540
 atttacaggt cgaagaagaa cttgacgctg cctgattgct ttactatgt tgacacacaa 600
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<210> 6
 <211> 227
 <212> PRT
 <213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 6

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His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Glu	Ile	Glu	Gly	Glu
		20						25					30		
Gly	His	Gly	Lys	Pro	Tyr	Ala	Gly	Thr	Asn	Phe	Val	Lys	Leu	Val	Val
		35					40					45			
Thr	Lys	Gly	Gly	Pro	Leu	Pro	Phe	Gly	Trp	His	Ile	Leu	Ser	Pro	Gln
	50					55					60				
Phe	Gln	Tyr	Gly	Asn	Lys	Thr	Phe	Val	Ser	Tyr	Pro	Arg	Asp	Ile	Pro
65				70						75				80	
Asp	Tyr	Ile	Lys	Gln	Ser	Phe	Pro	Glu	Gly	Phe	Thr	Trp	Glu	Arg	Ile
			85						90					95	
Met	Thr	Phe	Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser
			100					105					110		
Leu	Lys	Ser	Asn	Asn	Cys	Phe	Phe	Asn	Asp	Ile	Lys	Phe	Thr	Gly	Met
		115					120					125			
Asn	Phe	Pro	Pro	Asn	Gly	Pro	Val	Val	Gln	Lys	Lys	Thr	Ile	Gly	Trp
	130					135					140				
Glu	Pro	Ser	Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly
145				150						155				160	
Asp	Ile	Asp	Lys	Thr	Leu	Lys	Leu	Ser	Gly	Gly	Gly	His	Tyr	Thr	Cys
			165						170					175	
Ala	Phe	Lys	Thr	Ile	Tyr	Arg	Ser	Lys	Lys	Asn	Leu	Thr	Leu	Pro	Asp
		180						185					190		
Cys	Phe	Tyr	Tyr	Val	Asp	Thr	Lys	Leu	Asp	Ile	Arg	Lys	Phe	Asp	Glu
	195						200					205			
Asn	Tyr	Ile	Asn	Val	Glu	Gln	Asp	Glu	Ile	Ala	Thr	Ala	Arg	His	His
	210					215					220				
Gly	Leu	Lys													
225															

<210> 7

<211> 684

<212> DNA

<213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 7

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accaatttcg	ttaagcttgt	ggttaccaag	ggtgggcctc	ttccatttgg	ttggcacatt	180
ttgtcgccac	aattacaata	cggaaacaag	tcgtttgtca	gctaccctgc	agacatacct	240
gattatataa	agctgtcatt	tcctgagggc	tttacctggg	aaaggatcat	gacctttgaa	300
gacggtggcg	tgtgttgtat	caccagtgat	atcagtatga	aaagcaacaa	ctgtttcttc	360
tacgacatca	agttcactgg	catgaacttt	cctccaaatg	gacctgttgt	gcagaagaag	420
accacaggct	gggaaccag	tactgagcgt	ttgtatctgc	gtgacggggg	gctgacagga	480
gacattcata	agacactgaa	gctcagcgga	ggtggtcatt	acacatgcgt	ctttaaaact	540
atttacaggt	cgaagaagaa	cttgacgctg	cctgattgct	tttactatgt	tgacaccaaa	600
cttgatataa	ggaagttcga	cgaaaattac	atcaacgttg	agcaggatga	aattgctact	660
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<210> 8
 <211> 227
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 8
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 His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
 20 25 30
 Gly Asn Gly Lys Pro Tyr Ala Gly Thr Asn Phe Val Lys Leu Val Val
 35 40 45
 Thr Lys Gly Gly Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Gln
 50 55 60
 Leu Gln Tyr Gly Asn Lys Ser Phe Val Ser Tyr Pro Ala Asp Ile Pro
 65 70 75 80
 Asp Tyr Ile Lys Leu Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile
 85 90 95
 Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
 100 105 110
 Met Lys Ser Asn Asn Cys Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met
 115 120 125
 Asn Phe Pro Pro Asn Gly Pro Val Val Gln Lys Lys Thr Thr Gly Trp
 130 135 140
 Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly
 145 150 155 160
 Asp Ile His Lys Thr Leu Lys Leu Ser Gly Gly Gly His Tyr Thr Cys
 165 170 175
 Val Phe Lys Thr Ile Tyr Arg Ser Lys Lys Asn Leu Thr Leu Pro Asp
 180 185 190
 Cys Phe Tyr Tyr Val Asp Thr Lys Leu Asp Ile Arg Lys Phe Asp Glu
 195 200 205
 Asn Tyr Ile Asn Val Glu Gln Asp Glu Ile Ala Thr Ala Arg His His
 210 215 220
 Gly Leu Lys
 225

<210> 9
 <211> 687
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 9
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 gacaaattta agatcactgg ggatggaaca ggagaacctt acgaaggaac acagacttta 120
 catcttacag agaaggaagg caagcctctg acgttttctt tcgatgtatt gacaccagca 180
 tttcagtatg gaaaccgtac attcacaaa taccaggga atataccaga ctttttcaag 240
 cagaccgttt ctggtggcgg gtatacctgg gagcgaaaaa tgacttatga agacgggggc 300
 ataagtaacg tccgaagcga catcagtgtg aaaggtgact ctttctacta taagattcac 360
 ttcactggcg agtttctctc tcatggtcca gtgatgcaga ggaagacagt aaaatgggag 420

ccatccactg	aagtaatgta	tgttgacgac	aagagtgacg	gtgtgctgaa	gggagatgtc	480
aacatggctc	tgttgcttaa	agatggccgc	catttgagag	ttgactttaa	cacttcttac	540
atacccaaga	agaaggtcga	gaatatgcct	gactaccatt	ttatagacca	ccgcattgag	600
attctgggca	accagaaga	caagccggtc	aagctgtacg	agtgtgctgt	agctcgctat	660
tctctgctgc	ctgagaagaa	caagtca				687

<210> 10
 <211> 229
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 10

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Thr	Val	Asn	Gly	Asp	Lys	Phe	Lys	Ile	Thr	Gly	Asp	Gly	Thr	Gly	Glu
		20						25					30		
Pro	Tyr	Glu	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
		35					40					45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Gln	Tyr	Gly
	50					55					60				
Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	Gly	Asn	Ile	Pro	Asp	Phe	Phe	Lys
65					70					75					80
Gln	Thr	Val	Ser	Gly	Gly	Tyr	Thr	Trp	Glu	Arg	Lys	Met	Thr	Tyr	
			85					90					95		
Glu	Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	Asp	Ile	Ser	Val	Lys	Gly
		100						105					110		
Asp	Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His
		115					120					125			
Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu
	130					135					140				
Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys	Gly	Asp	Val
145					150					155					160
Asn	Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe
			165						170					175	
Asn	Thr	Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr
		180					185						190		
His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys
	195						200					205			
Pro	Val	Lys	Leu	Tyr	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu	Leu	Pro
	210					215					220				
Glu	Lys	Asn	Lys	Ser											
225															

<210> 11
 <211> 684
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 11

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gacaaattta	agatcactgg	ggatggaaca	ggagaacctt	acgaaggaac	acagacttta	120

catcttacag	agaaggaagg	caagcctctg	acgttttctt	tcgatgtatt	gacaccagca	180
tttcagtatg	gaaaccgtac	attcaccaaa	taccaggca	atataccaga	ctttttcaag	240
cagaccgttt	ctggtggcgg	gtatacctgg	gagcgaaaaa	tgacttatga	agacgggggc	300
ataagtaacg	tccgaagcga	catcagtgtg	aaaggtgact	ctttctacta	taagattcac	360
ttcactggcg	agtttcctcc	tcatgggtcca	gtgatgcaga	ggaagacagt	aaaatgggag	420
ccatccactg	aagtaatgta	tgtggacgat	aagagtgggtg	gtgagctgaa	gggagatgtc	480
aacatggctc	tgttgcttaa	agatggccgc	catttgagag	ttgacttcaa	cacttcttac	540
ataccaaga	agaaggtcga	gaatatgcct	gactaccatt	ttatagacca	ccgcattgag	600
attctgggca	accagaaga	caagccggtc	aagctgtacg	agtgtgctgt	agctcgctat	660
tctctgctgc	ctgagaagaa	caag				684

<210> 12
 <211> 228
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 12

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
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Thr	Val	Asn	Gly	Asp	Lys	Phe	Lys	Ile	Thr	Gly	Asp	Gly	Thr	Gly	Glu
		20						25					30		
Pro	Tyr	Glu	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
		35					40					45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Gln	Tyr	Gly
	50					55					60				
Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	Gly	Asn	Ile	Pro	Asp	Phe	Phe	Lys
65					70				75						80
Gln	Thr	Val	Ser	Gly	Gly	Gly	Tyr	Thr	Trp	Glu	Arg	Lys	Met	Thr	Tyr
			85					90						95	
Glu	Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	Asp	Ile	Ser	Val	Lys	Gly
			100					105					110		
Asp	Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His
		115				120						125			
Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu
		130				135					140				
Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Gly	Gly	Glu	Leu	Lys	Gly	Asp	Val
145				150					155					160	
Asn	Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe
			165					170						175	
Asn	Thr	Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr
		180					185						190		
His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys
		195				200					205				
Pro	Val	Lys	Leu	Tyr	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu	Leu	Pro
	210					215					220				
Glu	Lys	Asn	Lys												
225															

<210> 13
 <211> 675
 <212> DNA
 <213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 13

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gagaaggaag	gcaagcctct	gacgttttct	ttcgatgtat	tgacaccagc	atttcagtat	180
ggcaaccgta	cattcaccaa	ataccacaggc	aataataccag	actttttcaa	gcagaccggt	240
tctggtggcg	ggtatacctg	ggagcgaaaa	atgacttatg	aagacggggg	cataagtaac	300
gtccgaagcg	acatcagtgt	gaaaggtgac	tctttctact	ataagattca	cttcactggc	360
gaatttcctt	ctcacgggtcc	agtgatgcag	aagaagacgg	taaaatggga	gccatccact	420
gaagtaaatgt	atgtggacga	taagagtgat	ggtgtgctga	aggagatgt	caacatggct	480
ctggttgctta	aagatggccg	ccatttgcg	gtggacttca	acacttctta	cataccaag	540
aagaaggtcg	agaatatgcc	tgactaccat	tttatagacc	accgcattga	gattctgggc	600
aaccagatg	acaatccggt	caagctgtac	gagtgtgctg	tagctcgctg	ttctctgctg	660
cctgagaaga	acaag					675

<210> 14

<211> 225

<212> PRT

<213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 14

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Gly	Asp	Lys	Phe	Lys	Ile	Thr	Gly	Asp	Gly	Thr	Gly	Glu	Pro	Tyr	Glu
			20					25					30		
Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys	Pro	Leu	Thr
		35					40					45			
Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr
	50					55					60				
Phe	Thr	Lys	Tyr	Pro	Gly	Asn	Ile	Pro	Asp	Phe	Phe	Lys	Gln	Thr	Val
65					70				75						80
Ser	Gly	Gly	Gly	Tyr	Thr	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu	Asp	Gly
				85				90					95		
Gly	Ile	Ser	Asn	Val	Arg	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp	Ser	Phe
			100				105						110		
Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Ser	His	Gly	Pro	Val
		115					120					125			
Met	Gln	Lys	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Val	Met	Tyr
	130					135					140				
Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys	Gly	Asp	Val	Asn	Met	Ala
145					150					155					160
Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn	Thr	Ser
			165					170						175	
Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe	Ile
			180					185					190		
Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Asp	Asp	Asn	Pro	Val	Lys
		195					200					205			
Leu	Tyr	Glu	Cys	Ala	Val	Ala	Arg	Cys	Ser	Leu	Leu	Pro	Glu	Lys	Asn
	210					215					220				
Lys															
225															

<210> 15

<211> 693
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

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 aatcttacag tggaaggagg caagcctctg acattttctt tcgatatatt gacaccagta 180
 tttatgtatg gcaacagagc attcaccaaa taccagaga gtatcccaga ctttttcaag 240
 cagaccgttt ctggtggcgg gtatacttg aaacgaaaga tgatttatga tcacgaggct 300
 gagggcgtga gtaccgttga cggggacatc agtgtgaatg gagactgtt catctataag 360
 attacgtttg acggcacatt tcgtgaagat ggtgcagtga tgcagaagat gacggaaaaa 420
 tgggaaccat ccaactgaagt gatgtacaag gacgataaaa atgatgatgt gctgaaggga 480
 gatgtcaacc atgctctttt gcttaaagat ggccgccatg tgcgagttga tttcaatacc 540
 tcttaciaaag ccaagtcaaa gatcgagaat atgcctggtt accattttgt agaccaccgc 600
 attgagataa tagggcgatc atcgcaagac acgaaggtca agctgttcga gaacgctgtc 660
 gctcgctgtt ctctgctgcc tgagaagaac cag 693

<210> 16
 <211> 231
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 16
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 20 25 30
 Pro Tyr Asp Gly Thr Gln Ile Leu Asn Leu Thr Val Glu Gly Gly Lys
 35 40 45
 Pro Leu Thr Phe Ser Phe Asp Ile Leu Thr Pro Val Phe Met Tyr Gly
 50 55 60
 Asn Arg Ala Phe Thr Lys Tyr Pro Glu Ser Ile Pro Asp Phe Phe Lys
 65 70 75 80
 Gln Thr Val Ser Gly Gly Gly Tyr Thr Trp Lys Arg Lys Met Ile Tyr
 85 90 95
 Asp His Glu Ala Glu Gly Val Ser Thr Val Asp Gly Asp Ile Ser Val
 100 105 110
 Asn Gly Asp Cys Phe Ile Tyr Lys Ile Thr Phe Asp Gly Thr Phe Arg
 115 120 125
 Glu Asp Gly Ala Val Met Gln Lys Met Thr Glu Lys Trp Glu Pro Ser
 130 135 140
 Thr Glu Val Met Tyr Lys Asp Asp Lys Asn Asp Asp Val Leu Lys Gly
 145 150 155 160
 Asp Val Asn His Ala Leu Leu Leu Lys Asp Gly Arg His Val Arg Val
 165 170 175
 Asp Phe Asn Thr Ser Tyr Lys Ala Lys Ser Lys Ile Glu Asn Met Pro
 180 185 190
 Gly Tyr His Phe Val Asp His Arg Ile Glu Ile Ile Gly Arg Ser Ser
 195 200 205
 Gln Asp Thr Lys Val Lys Leu Phe Glu Asn Ala Val Ala Arg Cys Ser

210 215 220
 Leu Leu Pro Glu Lys Asn Gln
 225 230

<210> 17
 <211> 687
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 17
 atgaagggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta agatcactgg ggatggaaca ggagaacctt acgaaggaac acagacttta 120
 catcttacag agaaggaagg caagcctctg acgttttctt tcgatgtatt gacaccagca 180
 tttcagtatg gaaaccgtac attcaccaaa taccaggga atataccaga ctttttcaag 240
 cagaccgttt ctggtggcgg gtatacctgg gagcgaaaaa tgacttatga agacgggggc 300
 ataagtaacg tccgaagcga catcagtgtg aaaggtgact ctttctacta taagattcac 360
 ttcactggcg agtttcctcc tcatggtcca gtgatgcaga ggaagacagt aaaatgggag 420
 ccatccactg aagtaaatgta tgttgacgac aagagtgcag gtgtgctgaa gggagatgtc 480
 aacatggctc tgttgcttaa agatggccgc catttgagag ttgactttaa cacttcttac 540
 ataccaaga agaaggtcga gaatatgcct gactaccatt ttatagacca ccgcattgag 600
 attctgggca acccagaaga caagccggtc aagctgtacg agtgtgctgt agctcgctat 660
 tctctgctgc ctgagaagaa caagtaa 687

<210> 18
 <211> 228
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 18
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Lys Ile Thr Gly Asp Gly Thr Gly Glu
 20 25 30
 Pro Tyr Glu Gly Thr Gln Thr Leu His Leu Thr Glu Lys Glu Gly Lys
 35 40 45
 Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala Phe Gln Tyr Gly
 50 55 60
 Asn Arg Thr Phe Thr Lys Tyr Pro Gly Asn Ile Pro Asp Phe Phe Lys
 65 70 75 80
 Gln Thr Val Ser Gly Gly Gly Tyr Thr Trp Glu Arg Lys Met Thr Tyr
 85 90 95
 Glu Asp Gly Gly Ile Ser Asn Val Arg Ser Asp Ile Ser Val Lys Gly
 100 105 110
 Asp Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His
 115 120 125
 Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
 130 135 140
 Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val
 145 150 155 160
 Asn Met Ala Leu Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp Phe
 165 170 175

Asn Thr Ser Tyr Ile Pro Lys Lys Lys Val Glu Asn Met Pro Asp Tyr
 180 185 190
 His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys
 195 200 205
 Pro Val Lys Leu Tyr Glu Cys Ala Val Ala Arg Tyr Ser Leu Leu Pro
 210 215 220
 Glu Lys Asn Lys
 225

<210> 19
 <211> 762
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 19
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta agatcactgg ggatggaaca ggagaacctt acgaaggaac acagacttta 120
 catcttacag agaaggaagg caagcctctg acgttttctt tcgatgtatt gacaccagca 180
 ttctcagtatg gaaaccgtac attcaccaaa taccaggga atataccaga ctttttcaag 240
 cagaccgttt ctggtggcgg gtatacctgg gagcgaaaaa tgacttatga agacgggggc 300
 ataagtaacg tccgaagcga catcagtgtg aaaggtgact ctttctacta taagattcac 360
 ttactggcg agtttctctc tcatggtcca gtgatgcaga ggaagacagt aaaatgggag 420
 ccatccactg aagtaatgta tgttgacgac aagagtgcag gtgtgctgaa gggagatgtc 480
 aacatggctc tgttgcttaa agatggccgc catttgagag ttgactttta cacttcttac 540
 ataccaaga agaaggtcga gaatatgcct gactaccatt ttatagacca ccgcattgag 600
 attctgggca accagaaga caagccggtc aagctgtacg agtgtgctgt agctcgctat 660
 tctctgctgc ctgagaagaa caagtcaaag ggcaattcga agcttgaagg taagcctatc 720
 cctaaccctc tcctcggtct cgattctacg cgtaccggtt aa 762

<210> 20
 <211> 253
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 20
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Lys Ile Thr Gly Asp Gly Thr Gly Glu
 20 25 30
 Pro Tyr Glu Gly Thr Gln Thr Leu His Leu Thr Glu Lys Glu Gly Lys
 35 40 45
 Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala Phe Gln Tyr Gly
 50 55 60
 Asn Arg Thr Phe Thr Lys Tyr Pro Gly Asn Ile Pro Asp Phe Phe Lys
 65 70 75 80
 Gln Thr Val Ser Gly Gly Gly Tyr Thr Trp Glu Arg Lys Met Thr Tyr
 85 90 95
 Glu Asp Gly Gly Ile Ser Asn Val Arg Ser Asp Ile Ser Val Lys Gly
 100 105 110
 Asp Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His
 115 120 125

Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu
130						135					140				
Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys	Gly	Asp	Val
145					150					155					160
Asn	Met	Ala	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	
			165					170					175		
Asn	Thr	Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr
		180						185					190		
His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys
	195					200						205			
Pro	Val	Lys	Leu	Tyr	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu	Leu	Pro
	210					215					220				
Glu	Lys	Asn	Lys	Ser	Lys	Gly	Asn	Ser	Lys	Leu	Glu	Gly	Lys	Pro	Ile
225					230					235					240
Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly			
			245						250						

<210> 21
 <211> 786
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 21

gtgatggcga	tttccgctct	aaagaacgtc	atcatcatcg	taatcatata	ctcctgcagc	60
actagtgcctg	attcgtcgaa	ctcttactct	ggatcctcct	tcgcgaatgg	gattgcagag	120
gaaatgatga	ctgacctgca	tttagagggt	gctgttaacg	ggcaccactt	tacaattaaa	180
ggcgaggag	gaggctaccc	ttacgaggga	gtgcagttta	tgagcctcga	ggtagtcaat	240
ggtgccccctc	ttcgtttctc	ttttgatatc	ttgacaccgg	cattcatgta	tggcaacaga	300
gtgttcacca	agtatccaaa	agagatacca	cactattttca	agcagacggt	tcctgaaggg	360
tatcactggg	aaagaagcat	tccctttcaa	gatcaggcct	cgtgcacggt	aaccagccac	420
ataaggatga	aagaggaaga	ggagcggcat	tttcttctta	acgtcaaatt	ttactgtgtg	480
aattttcccc	ccaatggtcc	agtcatgcag	aggaggatac	ggggatggga	gccatccact	540
gagaacattt	atccgcgtga	tgaatttcta	gagggccatg	atgacatgac	tcttcggggt	600
gaaggagggtg	gctattaccg	agctgaattc	agaagttctt	acaaaggaaa	gcactcaatc	660
aacatgccag	actttcactt	catagaccac	cgcattgaga	ttatggagca	tgacgaagac	720
tacaaccatg	ttaagctgcg	tgaagtagcc	catgctcggt	actctccgct	gccttctgtg	780
cactaa						786

<210> 22
 <211> 261
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 22

Val	Met	Ala	Ile	Ser	Ala	Leu	Lys	Asn	Val	Ile	Ile	Ile	Val	Ile	Ile
1				5				10					15		
Tyr	Ser	Cys	Ser	Thr	Ser	Ala	Asp	Ser	Ser	Asn	Ser	Tyr	Ser	Gly	Ser
			20					25				30			
Ser	Phe	Ala	Asn	Gly	Ile	Ala	Glu	Glu	Met	Met	Thr	Asp	Leu	His	Leu
	35					40					45				
Glu	Gly	Ala	Val	Asn	Gly	His	His	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly

50		55		60	
Gly Tyr Pro Tyr Glu	Gly Val Gln Phe Met Ser	Leu Glu Val Val Asn			
65		70		75	80
Gly Ala Pro Leu Pro	Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met				
	85		90		95
Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro His Tyr					
	100		105		110
Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ser Ile Pro					
	115		120		125
Phe Gln Asp Gln Ala Ser Cys Thr Val Thr Ser His Ile Arg Met Lys					
	130		135		140
Glu Glu Glu Glu Arg His Phe Leu Leu Asn Val Lys Phe Tyr Cys Val					
145		150		155	160
Asn Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp					
	165		170		175
Glu Pro Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly					
	180		185		190
His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Gly Tyr Tyr Arg Ala					
	195		200		205
Glu Phe Arg Ser Ser Tyr Lys Gly Lys His Ser Ile Asn Met Pro Asp					
	210		215		220
Phe His Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp					
225		230		235	240
Tyr Asn His Val Lys Leu Arg Glu Val Ala His Ala Arg Tyr Ser Pro					
	245		250		255
Leu Pro Ser Val His					
	260				

<210> 23
 <211> 786
 <212> DNA
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 23	
gtgatggcga tttccgctct aaagaacgtc atcatcatcg taatcatata ctctgcagc	60
actagtgtcg attcgtcgaa ctcttactct ggatcctcct tcgcgaatgg gattgcagag	120
gaaatgatga ctgacctgca tttagagggt gctgttaacg ggcaccactt tacaattaaa	180
ggcgaaggag gaggctaccc ttacgaggga gtgcagttta tgagcctcga ggtagtcaat	240
ggtgcccctc ttccgttctc ttttgatata ttgacaccgg cattcatgta tggcaacaga	300
gtgttcacca agtatccaaa agagatacca gactatttca agcagacgtt tcctgaaggg	360
tatcactggg aaagaagcat tccctttcaa gatcaggcct cgtgcacggg aaccagccac	420
ataaggatga aagaggaaga ggagcggcat tttcttctta acgtcaaatt ttactgtgtg	480
aattttcccc ccaatgggcc agtcatgcag aggaggatac ggggatggga gccatccact	540
gagaacattt atccgcgtga tgaatttcta gagggccatg atgacatgac tcttcggggt	600
gaaggagggtg gctattaccg agctgaattc agaagtctctt acaaaggaaa gcactcaatc	660
aacatgccag actttcactt catagaccac cgcattgaga ttatggagca tgacgaagac	720
tacaaccatg ttaagctgcg tgaagtagcc catgctcgtt actctccgct gccttctgtg	780
cactaa	786

<210> 24
 <211> 261
 <212> PRT
 <213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 24

Val Met Ala Ile Ser Ala Leu Lys Asn Val Ile Ile Ile Val Ile Ile
1 5 10 15
Tyr Ser Cys Ser Thr Ser Ala Asp Ser Ser Asn Ser Tyr Ser Gly Ser
20 25 30
Ser Phe Ala Asn Gly Ile Ala Glu Met Met Thr Asp Leu His Leu
35 40 45
Glu Gly Ala Val Asn Gly His His Phe Thr Ile Lys Gly Glu Gly Gly
50 55 60
Gly Tyr Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn
65 70 75 80
Gly Ala Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met
85 90 95
Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr
100 105 110
Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ser Ile Pro
115 120 125
Phe Gln Asp Gln Ala Ser Cys Thr Val Thr Ser His Ile Arg Met Lys
130 135 140
Glu Glu Glu Glu Arg His Phe Leu Leu Asn Val Lys Phe Tyr Cys Val
145 150 155 160
Asn Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp
165 170 175
Glu Pro Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly
180 185 190
His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Gly Tyr Tyr Arg Ala
195 200 205
Glu Phe Arg Ser Ser Tyr Lys Gly Lys His Ser Ile Asn Met Pro Asp
210 215 220
Phe His Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp
225 230 235 240
Tyr Asn His Val Lys Leu Arg Glu Val Ala His Ala Arg Tyr Ser Pro
245 250 255
Leu Pro Ser Val His
260

<210> 25

<211> 783

<212> DNA

<213> Unknown

<220>

<223> Obtained from an environmental sample

<400> 25

atggcgattt ccgctctaaa gaacgtcatc atcatcgtaa tcatatactc ccgcagcact 60
agtgtctgatt cgtcgaactc ttactctgga tcctccttcg cgaatgggat tgcagaggaa 120
atgatgactg acctgcattt agaggggtgct gttaacgggc accactttac aattaaaggc 180
gaaggaggag gctaccctta cgagggagtg cagtttatga gcctcgaggt agtcaatggt 240
gcccctcttc cgttctcttt tgatatcttg acaccggcat tcatgtatgg caacagagtg 300
ttcaccaagt atccaaaaga gataccagac tatttcaagc agacgtttcc tgaagggtat 360
cactgggaaa gaagcattcc ctttcaagat caggcctcgt gcacggtaac cagccacata 420
aggatgaaag aggaagagga gcggcatttt cttcttaacg tcaaatttta ctgtgtgaat 480
tttcccccca atggtccagt catgcagagg aggatacggg gatgggagcc atccactgag 540

aacatttatc	cgcgtgatga	atttctagag	ggccatgatg	acatgactct	tcggggttgaa	600
ggaggtggct	attaccgagc	tgaattcaga	agttcttaca	aaggaaagca	ctcaatcaac	660
atgccagact	ttcacttcat	agaccaccgc	attgagatta	tggagcatga	cgaagactac	720
aaccatgtta	agctgcgtga	agtagcctat	gctcgttact	ctccgctgcc	ttctgtgcac	780
taa						783

<210> 26
 <211> 260
 <212> PRT
 <213> Unknown

<220>
 <223> Obtained from an environmental sample

<400> 26

Met	Ala	Ile	Ser	Ala	Leu	Lys	Asn	Val	Ile	Ile	Ile	Val	Ile	Ile	Tyr
1				5					10					15	
Ser	Arg	Ser	Thr	Ser	Ala	Asp	Ser	Ser	Asn	Ser	Tyr	Ser	Gly	Ser	Ser
			20					25					30		
Phe	Ala	Asn	Gly	Ile	Ala	Glu	Glu	Met	Met	Thr	Asp	Leu	His	Leu	Glu
		35					40					45			
Gly	Ala	Val	Asn	Gly	His	His	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly
	50					55					60				
Tyr	Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly
65					70					75				80	
Ala	Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr
				85					90					95	
Gly	Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe
			100					105					110		
Lys	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ser	Ile	Pro	Phe
		115					120					125			
Gln	Asp	Gln	Ala	Ser	Cys	Thr	Val	Thr	Ser	His	Ile	Arg	Met	Lys	Glu
	130					135					140				
Glu	Glu	Glu	Arg	His	Phe	Leu	Leu	Asn	Val	Lys	Phe	Tyr	Cys	Val	Asn
145					150					155				160	
Phe	Pro	Pro	Asn	Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu
			165					170					175		
Pro	Ser	Thr	Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	His
		180					185						190		
Asp	Asp	Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Gly	Tyr	Tyr	Arg	Ala	Glu
	195					200					205				
Phe	Arg	Ser	Ser	Tyr	Lys	Gly	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe
	210				215						220				
His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr
225					230					235				240	
Asn	His	Val	Lys	Leu	Arg	Glu	Val	Ala	Tyr	Ala	Arg	Tyr	Ser	Pro	Leu
			245					250						255	
Pro	Ser	Val	His												
			260												

<210> 27
 <211> 684
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 27
atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc 60
acttttaacg gccacaaatt tgagatcgaa ggggaggaa acggaacc ttacgcagga 120
acaaattttg taaaacttgt agtgacgaaa ggcgggcctc tgccgtttgg ttggcatata 180
ttgtcaccac aattacagta tggaacaag tcattcgtca gctaccagc cgatatacca 240
gactatatca agctgtcctt tcctgagggc tttacctggg agcgaataat gacttttgag 300
gacgggggcg tatgttgcac cacaagcgac atcagtatga aaagtaacaa ctgtttcttc 360
tatgacatta agttcactgg catgaacttt cctcctaatt gtccagtggg gcagaaaaag 420
acaacaggat gggagccatc cactgaacga ttgtatcttc gcgacgggtg gctgacggga 480
gatattccaca agactctgaa acttagcggg ggcggccatt acacatgtgt ctttaaaact 540
atttacagat ccaagaagaa cctcacgctt ccggtattgt tctattatgt agacacacaa 600
cttgatattc ggaagttcga cgaaaattac atcaacgtcg agcaggacga gattgctaca 660
gctcgccatc atgggctgaa gtag 684

<210> 28
<211> 227
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 28
Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
1 5 10 15
His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
20 25 30
Gly Asn Gly Lys Pro Tyr Ala Gly Thr Asn Phe Val Lys Leu Val Val
35 40 45
Thr Lys Gly Gly Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Gln
50 55 60
Leu Gln Tyr Gly Asn Lys Ser Phe Val Ser Tyr Pro Ala Asp Ile Pro
65 70 75 80
Asp Tyr Ile Lys Leu Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile
85 90 95
Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
100 105 110
Met Lys Ser Asn Asn Cys Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met
115 120 125
Asn Phe Pro Pro Asn Gly Pro Val Val Gln Lys Lys Thr Thr Gly Trp
130 135 140
Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly
145 150 155 160
Asp Ile His Lys Thr Leu Lys Leu Ser Gly Gly Gly His Tyr Thr Cys
165 170 175
Val Phe Lys Thr Ile Tyr Arg Ser Lys Lys Asn Leu Thr Leu Pro Asp
180 185 190
Cys Phe Tyr Tyr Val Asp Thr Lys Leu Asp Ile Arg Lys Phe Asp Glu
195 200 205
Asn Tyr Ile Asn Val Glu Gln Asp Glu Ile Ala Thr Ala Arg His His
210 215 220
Gly Leu Lys
225

<210> 29
<211> 687

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 29
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tggttaacggc 60
 gacaaattta agatcactgg ggatggaaca ggagaacctt acgaaggaac acagacttta 120
 catcttacag agaaggaagg caagcctctg acgttttctt tcgatgtatt gacaccagca 180
 tttcagtatg gaaaccgtac attcaccaaa taccagggca atataccaga ctttttcaag 240
 cagaccgttt ctgggtggcg gtatacctgg gagcgaaaaa tgacttatga ggacgggggc 300
 ataagtaacg tccgaagcga catcagtgtg aaaggtgact ctttctacta taagattcac 360
 ttcactggcg agtttctctc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag 420
 ccatccactg aagtaatgta tgttgacgac aagagtgcag gtgtgctgaa gggagatgtc 480
 aacatggctc tgttgcttaa agatggccgc catttgagag ttgactttaa cacttcttac 540
 atacccaaga agaaggtcga gaatatgcct gactaccatt ttatagacca ccgcattgag 600
 attctgggca acccagaaga caagccggtc aagctgtacg agtgtgctgt agctcgctat 660
 tctctgctgc ctgagaagaa caagtag 687

<210> 30
 <211> 228
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 30
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Lys Ile Thr Gly Asp Gly Thr Gly Glu
 20 25 30
 Pro Tyr Glu Gly Thr Gln Thr Leu His Leu Thr Glu Lys Glu Gly Lys
 35 40 45
 Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala Phe Gln Tyr Gly
 50 55 60
 Asn Arg Thr Phe Thr Lys Tyr Pro Gly Asn Ile Pro Asp Phe Phe Lys
 65 70 75 80
 Gln Thr Val Ser Gly Gly Gly Tyr Thr Trp Glu Arg Lys Met Thr Tyr
 85 90 95
 Glu Asp Gly Gly Ile Ser Asn Val Arg Ser Asp Ile Ser Val Lys Gly
 100 105 110
 Asp Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His
 115 120 125
 Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
 130 135 140
 Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val
 145 150 155 160
 Asn Met Ala Leu Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp Phe
 165 170 175
 Asn Thr Ser Tyr Ile Pro Lys Lys Lys Val Glu Asn Met Pro Asp Tyr
 180 185 190
 His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys
 195 200 205
 Pro Val Lys Leu Tyr Glu Cys Ala Val Ala Arg Tyr Ser Leu Leu Pro
 210 215 220

Glu Lys Asn Lys
225

<210> 31
<211> 786
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 31
atgatggcga tttccgctct aaagaacgtc atcatcatcg taatcatata ctccctgcagc 60
actagtgtcg attcgtcgaa ctcttactct ggatcctcct tcgcgaatgg gattgcggaa 120
gaaatgatga ccgatctgca tctggagggc gctgttaacg gccaccactt tacgatcaaa 180
ggggaaggag gaggataccc ttacgaagga gtacagttta tgtctcttga agtgggtgaat 240
ggcgcgcctc tgccgttttc tttcgatata ttgacaccag catttatgta tggaaaccgt 300
gtattcacca aatacccaaa agagatacca gactatttca agcagacctt tcctgaaggc 360
tatcactggg agcgaagcat tccttttcaa gaccaggcct catgtaccgt cacaagccac 420
atcaggatga aagaggaaga ggagcggcat ttcctcctta acgttaaatt ctattgcgtg 480
aattttcctc ctaatggtcc agtgatgcag aggaggatac gaggatggga gccatccact 540
gaaaacattt atcctcgcga cgaattttctg gagggacatg acgacatgac tctgcgggtt 600
gaaggtggcg gctattacag agctgaattt agaagttctt acaaaggcaa gcactcgatc 660
aacatgccgg atttccattt tatagaccac cgcattgaga ttatggagca tgacgaggac 720
tacaaccatg tcaagctgcg cgaggttgct catgctcgct attctccgct gccttcgggtg 780
cactag 786

<210> 32
<211> 261
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 32
Met Met Ala Ile Ser Ala Leu Lys Asn Val Ile Ile Ile Val Ile Ile
1 5 10 15
Tyr Ser Cys Ser Thr Ser Ala Asp Ser Ser Asn Ser Tyr Ser Gly Ser
20 25 30
Ser Phe Ala Asn Gly Ile Ala Glu Met Met Thr Asp Leu His Leu
35 40 45
Glu Gly Ala Val Asn Gly His His Phe Thr Ile Lys Gly Glu Gly Gly
50 55 60
Gly Tyr Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn
65 70 75 80
Gly Ala Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met
85 90 95
Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr
100 105 110
Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ser Ile Pro
115 120 125
Phe Gln Asp Gln Ala Ser Cys Thr Val Thr Ser His Ile Arg Met Lys
130 135 140
Glu Glu Glu Glu Arg His Phe Leu Leu Asn Val Lys Phe Tyr Cys Val
145 150 155 160
Asn Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp

<220>

<223> Synthetically generated

<400> 38

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Glu	Gly
1				5					10					15	
Ala	Val	Asn	Gly	His	His	Phe	Glu	Ile	Glu	Gly	Glu	Gly	Asn	Gly	Lys
		20						25					30		
Pro	Tyr	Ala	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
		35					40					45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70					75					80
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ser	Ile	Pro	Phe	Gln
			85						90					95	
Asp	Gln	Ala	Ser	Cys	Thr	Val	Thr	Ser	His	Ile	Arg	Met	Lys	Glu	Glu
			100					105					110		
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro
		115					120					125			
Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser
	130					135					140				
Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	Asp	Val	Asn
145					150					155					160
Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Gly	Tyr	Tyr	Arg	Ala	Glu	Phe	Arg
			165					170						175	
Ser	Ser	Tyr	Lys	Gly	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe
			180					185					190		
Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val
	195						200					205			
Lys	Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys
	210					215					220				
Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	
225					230					235					

<210> 39

<211> 738

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 39

atgagtcatt	ccaagagtgt	gatcaaggac	gaaatgttca	tcaagattca	tctggaaggc	60
acttttaacg	gccacaaatt	tgagatcgaa	ggggagggaa	acggaaaacc	ttacgcagga	120
gtacagttta	tgtctcttga	agtgggtgaat	ggcgcgccctc	tgccgttttg	ttggcatata	180
ttgtcaccag	catttatgta	tggaaccgt	gtattcacca	aatacccaaa	agagatacca	240
gactatttca	agcagacctt	tcctgaaggc	tatcactggg	agcgaataat	gacttttgag	300
gacgggggcg	tatgttgcac	cacaagcgac	atcagtgtga	aaggtgactc	tttcttctat	360
gacattaagt	tcactggcat	gaactttcct	cctcatggtc	cagtgatgca	gagaaagaca	420
gtaaaatggg	agccatccac	tgaacgattg	tatcttcgcg	acgggtgtgct	gacgggacat	480
gacgacatga	ctctgcgggt	tgaaggtggc	ggccattaca	catgtgtctt	taaaactatt	540
tacagatcca	agaagaaggt	cgagaatatg	cctgactacc	attttataga	ccaccgcatt	600
gagattctgg	gcaaccacga	agacaagccg	gtcaagctgt	acgagattgc	tacagctcgc	660
catcatgggc	tgaagggtaa	gcctatccct	aaccctctcc	tcggactcga	ttctacgcgt	720
accggtagct	cgaggagg					738

<210> 40
 <211> 246
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 40
 Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
 1 5 10 15
 His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
 20 25 30
 Gly Asn Gly Lys Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val
 35 40 45
 Val Asn Gly Ala Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Ala
 50 55 60
 Phe Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro
 65 70 75 80
 Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile
 85 90 95
 Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
 100 105 110
 Val Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn
 115 120 125
 Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu
 130 135 140
 Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly His
 145 150 155 160
 Asp Asp Met Thr Leu Arg Val Glu Gly Gly Gly His Tyr Thr Cys Val
 165 170 175
 Phe Lys Thr Ile Tyr Arg Ser Lys Lys Lys Val Glu Asn Met Pro Asp
 180 185 190
 Tyr His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp
 195 200 205
 Lys Pro Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu
 210 215 220
 Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg
 225 230 235 240
 Thr Gly Ser Ser Arg Arg
 245

<210> 41
 <211> 726
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 41
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tggttaacggc 60
 gacaaatttg agatcgaagg ggaggggaaac ggaaaacctt acgcaggagt acagtttatg 120
 tctcttgaag tgggtgaatgg cgcgctctg ccgttttctt tcgatataatt gacaccacaa 180
 ttacagtatg gaaacaagtc attcgtcagc taccctaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaagcattc cttttcaaga ccaggcctca 300

tgtaccgtca	caagcgacat	cagtatgaaa	agtaacaact	gtttctacta	taagattcac	360
ttcactggcg	agtttcctcc	tcatgggtcca	gtgatgcaga	gaaagacagt	aaaatgggag	420
ccatccactg	aagtaatgta	tgttgacgac	aagagtgcgc	gtgtgctgaa	gggacatgac	480
gacatgactc	tgcggggttg	aggtggccgc	catttgagag	ttgactttta	cacttcttac	540
ataccaagc	actcgatcaa	catgccgat	ttccatttta	tagaccaccg	cattgatatt	600
cggaagtctg	acgaaaatta	catcaacgtc	gagcaggacg	agattgctac	agctcgccat	660
catgggctga	agggtaagcc	tatccctaac	cctctcctcg	gactcgattc	tacgcgtacc	720
ggttag						726

<210> 42

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 42

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Glu	Ile	Glu	Gly	Glu	Gly	Asn	Gly	Lys
		20						25					30		
Pro	Tyr	Ala	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Gln	Leu	Gln	Tyr	Gly
	50					55					60				
Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65				70					75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ser	Ile	Pro	Phe	Gln
			85					90						95	
Asp	Gln	Ala	Ser	Cys	Thr	Val	Thr	Ser	Asp	Ile	Ser	Met	Lys	Ser	Asn
			100					105					110		
Asn	Cys	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His
		115				120						125			
Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu
	130					135					140				
Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys	Gly	His	Asp
145				150					155					160	
Asp	Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Arg	His	Leu	Arg	Val	Asp	Phe
			165					170						175	
Asn	Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His
		180					185						190		
Phe	Ile	Asp	His	Arg	Ile	Asp	Ile	Arg	Lys	Phe	Asp	Glu	Asn	Tyr	Ile
	195					200						205			
Asn	Val	Glu	Gln	Asp	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys
	210					215					220				
Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr
225					230					235					240
Gly															

<210> 43

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 43

atgaagggg	tgaaggaagt	aatgaagatc	agtctggaga	tggaactgcac	tggttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataaccctt	acgaaggaac	aaatttttcta	120
aaacttgtag	tgacgaaagg	cgggcctctg	acgttttctt	tcgatgtatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactgggag	cgaagcattc	cttttcaaga	ccaggcctca	300
tgtaccgtca	caagcgacat	cagtatgaaa	agtaacaact	gtttcttcta	tgacattaag	360
ttcactggca	tgaactttcc	tcctcatggg	ccagtgtatg	agagaaagac	agtaaaatgg	420
gagccatcca	ctgaaaacat	ttatcctcgc	gacgaatttc	tggaaggaga	tgtcaacatg	480
gctctgttgc	ttaaagatgg	cgcctatttg	agagttgact	ttaacacttc	ttacataccc	540
aagcactcga	tcaacatgcc	ggatttccat	tttatagacc	accgcattga	tattcggaag	600
ttcgacgaaa	attacatcaa	cgtcgagcag	gacgagattg	ctacagctcg	ccatcatggg	660
ctgaagggta	agcctatccc	taaccctctc	ctcggactcg	attctacgcg	taccggttag	720

<210> 44

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 44

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
			20					25					30		
Pro	Tyr	Glu	Gly	Thr	Asn	Phe	Val	Lys	Leu	Val	Val	Thr	Lys	Gly	Gly
		35					40					45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50				55					60					
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70				75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ser	Ile	Pro	Phe	Gln
			85					90						95	
Asp	Gln	Ala	Ser	Cys	Thr	Val	Thr	Ser	Asp	Ile	Ser	Met	Lys	Ser	Asn
			100					105					110		
Asn	Cys	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn	Phe	Pro	Pro
	115						120					125			
His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr
	130					135					140				
Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn	Met
145					150					155					160
Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn	Thr
			165					170						175	
Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe	Ile
			180					185						190	
Asp	His	Arg	Ile	Asp	Ile	Arg	Lys	Phe	Asp	Glu	Asn	Tyr	Ile	Asn	Val
	195						200					205			
Glu	Gln	Asp	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys
	210					215					220				
Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	
225					230					235					

<210> 45

<211> 738
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 45
 atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc 60
 acttttaacg gccacaaatt tgagatcgaa ggggagggaa acggaaaacc ttacgcagga 120
 acacagactt tacatcttac agagaaggaa ggcaagcctc tgccgttttc tttcgatata 180
 ttgacaccac aattacagta tggaaacaag tcattcgtca gctaccagc cgatatacca 240
 gactatatca agctgtcctt tcctgagggc tttacctggg agcgaagcat tccttttcaa 300
 gaccaggcct catgtaccgt cacaagcgac atcagtatga aaagtaacaa ctgtttctac 360
 tataagattc acttcactgg cgagtttctt cctcatggtc cagtgatgca gagaaagaca 420
 gtaaaatggg agccatccac tgaagtaatg tatgttgacg acaagagtga cgggtgtgctg 480
 aagggagatg tcaacatggc tctgttgctt aaagatggcc gccatttgag agttgacttt 540
 aacacttctt acatacccaa gaagaaggtc gagaatatgc ctgactacca ttttatagac 600
 caccgcattg agattctggg caaccagaa gacaagccgg tcaagctgta cgagattgct 660
 acagctcgcc atcatgggct gaagggttaag cctatcccta accctctcct cggactcgat 720
 tctacgcgta ccggttag 738

<210> 46
 <211> 245
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 46
 Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
 1 5 10 15
 His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
 20 25 30
 Gly Asn Gly Lys Pro Tyr Ala Gly Thr Gln Thr Leu His Leu Thr Glu
 35 40 45
 Lys Glu Gly Lys Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Gln
 50 55 60
 Leu Gln Tyr Gly Asn Lys Ser Phe Val Ser Tyr Pro Ala Asp Ile Pro
 65 70 75 80
 Asp Tyr Ile Lys Leu Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ser
 85 90 95
 Ile Pro Phe Gln Asp Gln Ala Ser Cys Thr Val Thr Ser Asp Ile Ser
 100 105 110
 Met Lys Ser Asn Asn Cys Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu
 115 120 125
 Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu
 130 135 140
 Pro Ser Thr Glu Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu
 145 150 155 160
 Lys Gly Asp Val Asn Met Ala Leu Leu Leu Lys Asp Gly Arg His Leu
 165 170 175
 Arg Val Asp Phe Asn Thr Ser Tyr Ile Pro Lys Lys Lys Val Glu Asn
 180 185 190
 Met Pro Asp Tyr His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn
 195 200 205

Pro Glu Asp Lys Pro Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His
 210 215 220
 His Gly Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp
 225 230 235 240
 Ser Thr Arg Thr Gly
 245

<210> 47
 <211> 603
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 47
 atggcgcgcc ttctgccgtt ttctttcgat atattgacac cagcatttat gtatggaaac 60
 cgtgtattca ccaaataccc aaaagagata ccagactatt tcaagcagac ctttcctgaa 120
 ggctatcact gggagcgaaa aatgacttat gaggacgggg gcataagtaa cgtccgaagc 180
 cacatcagga tgaaagagga agaggagcgg catttcttct atgacattaa gttcactggc 240
 atgaactttc ctctcatggt tccagtgatg cagagaaaga cagtaaaatg ggagccatcc 300
 actgaagtaa tgtatgttga cgacaagagt gacggtgtgc tgaagggaca tgacgacatg 360
 actctgcggg ttgaaggtgg ccgccatttg agagttgact ttaacacttc ttacataccc 420
 aagaagaacc tcacgcttcc ggattgcttc tattatgtag acaccaaact tgagattatg 480
 gagcatgacg aggactacaa ccatgtcaag ctgcgcgaga ttgctacagc tcgccatcat 540
 gggctgaagg gtaagcctat ccctaaccct ctctcggac tcgattctac gcgtaccggt 600
 tag 603

<210> 48
 <211> 200
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 48
 Met Ala Arg Leu Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe
 1 5 10 15
 Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp
 20 25 30
 Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Lys Met
 35 40 45
 Thr Tyr Glu Asp Gly Gly Ile Ser Asn Val Arg Ser His Ile Arg Met
 50 55 60
 Lys Glu Glu Glu Glu Arg His Phe Phe Tyr Asp Ile Lys Phe Thr Gly
 65 70 75 80
 Met Asn Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys
 85 90 95
 Trp Glu Pro Ser Thr Glu Val Met Tyr Val Asp Asp Lys Ser Asp Gly
 100 105 110
 Val Leu Lys Gly His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Arg
 115 120 125
 His Leu Arg Val Asp Phe Asn Thr Ser Tyr Ile Pro Lys Lys Asn Leu
 130 135 140
 Thr Leu Pro Asp Cys Phe Tyr Tyr Val Asp Thr Lys Leu Glu Ile Met
 145 150 155 160

Glu His Asp Glu Asp Tyr Asn His Val Lys Leu Arg Glu Ile Ala Thr
165 170 175
Ala Arg His His Gly Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu
180 185 190
Gly Leu Asp Ser Thr Arg Thr Gly
195 200

<210> 49
<211> 828
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 49
atgatggcga tttccgctct aaagaacgtc atcatcatcg taatcatata ctctgcagc 60
actagtgtcg attcgtcgaa ctcttactct ggatcctcct tcgcgaatgg gattgcggaa 120
gaaatgatga ccgatctgca tctggactgc actgttaacg gcgacaaatt tgagatcgaa 180
ggggagggaac acggaaaacc ttacgcagga gtacagttta tgtctcttga agtgggtgaat 240
ggcgcgccctc tgccgttttc tttcgatata ttgacaccac aattacagta tggaaacaag 300
tcattcgtca gctacccaaa agagatacca gactatttca agcagacctt tcctgaaggc 360
tatcactggg agcgaagcat tccttttcaa gaccaggcct catgtaccgt cacaagcgac 420
atcagtgtga aaggtgactc tttcttctat gacattaagt tcaactggcat gaactttcct 480
cctcatggtc cagtgtatga gagaaagaca gtaaaatggg agccatccac tgaagtaatg 540
tatgttgacg acaagagtga cgggtgtgctg aagggacatg acgacatgac tctgcggggtt 600
gaaggtggcc gccatttgag agttgacttt aacacttctt acatacccaa gcactcgatc 660
aacatgccgg atttccattt tatagaccac cgcattgaga ttatggagca tgacgaggac 720
tacaaccatg tcaagctgcg cgagattgct acagctcgcc atcatgggct gaagggtaag 780
cctatcccta accctctcct cggactcgat tctacgcgta ccggttag 828

<210> 50
<211> 275
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 50
Met Met Ala Ile Ser Ala Leu Lys Asn Val Ile Ile Ile Val Ile Ile
1 5 10 15
Tyr Ser Cys Ser Thr Ser Ala Asp Ser Ser Asn Ser Tyr Ser Gly Ser
20 25 30
Ser Phe Ala Asn Gly Ile Ala Glu Met Met Thr Asp Leu His Leu
35 40 45
Asp Cys Thr Val Asn Gly Asp Lys Phe Glu Ile Glu Gly Glu Gly Asn
50 55 60
Gly Lys Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val Val Asn
65 70 75 80
Gly Ala Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Gln Leu Gln
85 90 95
Tyr Gly Asn Lys Ser Phe Val Ser Tyr Pro Lys Glu Ile Pro Asp Tyr
100 105 110
Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ser Ile Pro
115 120 125
Phe Gln Asp Gln Ala Ser Cys Thr Val Thr Ser Asp Ile Ser Val Lys

130		135		140
Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro				
145		150		155
Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser				
	165		170	
Thr Glu Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly				
	180		185	
His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Arg His Leu Arg Val				
	195		200	
Asp Phe Asn Thr Ser Tyr Ile Pro Lys His Ser Ile Asn Met Pro Asp				
	210		215	
Phe His Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp				
225		230		235
Tyr Asn His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg His His Gly				
	245		250	
Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr				
	260		265	
Arg Thr Gly			270	
	275			

<210> 51
 <211> 717
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 51
 atgaagggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaatttg agatcgaagg ggagggaaac ggaaaacctt acgcaggagt acagtttatg 120
 tctcttgaag tggatgaatgg cgcgcctctg acgttttctt tcgatgtatt gacaccagca 180
 tttcagtatg gaaaccgtac attcaccaaa taccagccg atataccaga ctatatcaag 240
 ctgtcctttc ctgagggtt tacctgggag cgaagcattc cttttcaaga ccaggcctca 300
 tgtaccgtca caagcgacat cagtgtgaaa ggtgactctt tcttctatga cattaagtgc 360
 actggcatga actttcctcc taatgggtcca gtgatgcaga ggaggatagc aggatgggag 420
 ccatccactg aaaacattta tcctcgcgac gaatttctgg agggacatga cgacatgact 480
 ctgcggttg aaggtggcgg ctattacaga gctgaattta gaagttctta caaaggcaag 540
 aagaaggtcg agaatatgcc tgactaccat tttatagacc accgcattga gattctgggc 600
 aaccagaag acaagccggt caagctgtac gagattgcta cagctcgcca tcatgggctg 660
 aagggttaagc ctatccctaa ccctctctc ggactcgatt ctacgcgtac cggttag 717

<210> 52
 <211> 238
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 52
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Glu Ile Glu Gly Glu Gly Asn Gly Lys
 20 25 30
 Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45

Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Gln	Tyr	Gly
50						55					60				
Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	Ala	Asp	Ile	Pro	Asp	Tyr	Ile	Lys
65					70					75					80
Leu	Ser	Phe	Pro	Glu	Gly	Phe	Thr	Trp	Glu	Arg	Ser	Ile	Pro	Phe	Gln
				85					90					95	
Asp	Gln	Ala	Ser	Cys	Thr	Val	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
			100					105					110		
Ser	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn	Phe	Pro	Pro	Asn
		115					120					125			
Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu	Pro	Ser	Thr	Glu
	130					135					140				
Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	His	Asp	Asp	Met	Thr
145					150					155					160
Leu	Arg	Val	Glu	Gly	Gly	Gly	Tyr	Tyr	Arg	Ala	Glu	Phe	Arg	Ser	Ser
				165					170					175	
Tyr	Lys	Gly	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe	Ile
			180					185					190		
Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val	Lys
		195					200					205			
Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro
	210					215					220				
Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly		
225					230					235					

<210> 53

<211> 714

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 53

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tggttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgctctg	ccgttttctt	tcgatataatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataaccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tcttctatga	cattaagtgc	360
actggcatga	actttcctcc	tcatgggtcca	gtgatgcaga	gaaagacagt	aaaatgggag	420
ccatccactg	aagtaatgta	tggtgacgac	aagagtgcag	gtgtgctgaa	gggagatgac	480
aacatggctc	tggtgcttaa	agatggcggc	cattacacat	gtgtctttaa	aactatttac	540
agatccaaga	agaaggctga	gaatatgcct	gactaccatt	ttatagacca	ccgcattgag	600
attatggagc	atgacgagga	ctacaacccat	gtcaagctgc	gcgagattgc	tacagctcgc	660
catcatgggc	tgaagggtaa	gcctatccct	aaccctctcc	tcggactcga	ttga	714

<210> 54

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 54

Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys

1	5	10	15
Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr			
20	25	30	
Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala			
35	40	45	
Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly			
50	55	60	
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys			
65	70	75	80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu			
85	90	95	
Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp			
100	105	110	
Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro His			
115	120	125	
Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu			
130	135	140	
Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val			
145	150	155	160
Asn Met Ala Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe			
165	170	175	
Lys Thr Ile Tyr Arg Ser Lys Lys Lys Val Glu Asn Met Pro Asp Tyr			
180	185	190	
His Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr			
195	200	205	
Asn His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu			
210	215	220	
Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp			
225	230	235	

<210> 55

<211> 711

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 55

atgaagggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgtagcggc	60
gacaaatttg	agatcgaagg	ggagggaaac	ggaaaacctt	acgcaggaac	aaattttgta	120
aaacttgtag	tgacgaaagg	cgggcctctg	ccgtttgggt	ggcatatatt	gtcaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	taccctaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactgggag	cgaagcattc	cttttcaaga	ccaggcctca	300
tgtaccgtca	caagcgacat	cagtgtgaaa	ggtgactctt	tctactataa	gattcacttc	360
actggcgagt	ttcctcctca	tgggtccagt	atgcagagaa	agacagtaaa	atgggagcca	420
tccactgaac	gattgtatct	tcgcgacggg	gtgctgacgg	gacatgacga	catgactctg	480
cgggttgaag	gtggccgcca	tttgagagtt	gactttaaca	cttcttacat	acccaagcac	540
tcgatcaaca	tgccggattt	ccattttata	gaccaccgca	ttgagattct	gggcaaccga	600
gaagacaagc	cgggtcaagct	gtacgagatt	gctacagctc	gccatcatgg	gctgaagggt	660
aagcctatcc	ctaaccctct	cctcggactc	gattctacgc	gtaccgggta	g	711

<210> 56

<211> 236

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 56

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Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1          5          10          15
Thr Val Ser Gly Asp Lys Phe Glu Ile Glu Gly Glu Gly Asn Gly Lys
 20          25          30
Pro Tyr Ala Gly Thr Asn Phe Val Lys Leu Val Val Thr Lys Gly Gly
 35          40          45
Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Ala Phe Met Tyr Gly
 50          55          60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65          70          75          80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ser Ile Pro Phe Gln
 85          90          95
Asp Gln Ala Ser Cys Thr Val Thr Ser Asp Ile Ser Val Lys Gly Asp
100          105          110
Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His Gly
115          120          125
Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu Arg
130          135          140
Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly His Asp Asp Met Thr Leu
145          150          155          160
Arg Val Glu Gly Gly Arg His Leu Arg Val Asp Phe Asn Thr Ser Tyr
165          170          175
Ile Pro Lys His Ser Ile Asn Met Pro Asp Phe His Phe Ile Asp His
180          185          190
Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val Lys Leu Tyr
195          200          205
Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys Pro Ile Pro
210          215          220
Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
225          230          235
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<210> 57

<211> 735

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 57

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atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc      60
acttttaacg gccacaaatt tacgatcaaa ggggaaggag gaggataccc ttacgaagga      120
acaaattttg taaaacttgt agtgacgaaa ggcgggcctc tgccgttttc tttcgatata      180
ttgacaccag catttcagta tggaaccgt acattcacca aatacccagc cgatatacca      240
gactatatca agctgtcctt tcctgagggc tttacctggg agcgaagcat tccttttcaa      300
gaccaggcct catgtaccgt cacaagccac atcaggatga aagaggaaga ggagcggcat      360
ttctactata agattcactt cactggcgag tttcctccta atggtccagt gatgcagagg      420
aggatacgag gatgggagcc atccactgaa cgattgtatc ttcgcgacgg tgtgctgacg      480
ggacatgacg acatgactct gcgggttgaa ggtggccgcc atttgagagt tgactttaac      540
acttcttaca tacccaagca ctcgatcaac atgccggatt tccattttat agaccaccgc      600
attgagatta tggagcatga cgaggactac aaccatgtca agctgcgcga gattgctaca      660
gctcgccatc atgggctgaa gggtaagcct atccctaacc ctctcctcgg actcgattct      720
acgcgtaccg gttag                                     735
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<210> 58
 <211> 244
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 58
 Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
 1 5 10 15
 His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Thr Ile Lys Gly Glu
 20 25 30
 Gly Gly Gly Tyr Pro Tyr Glu Gly Thr Asn Phe Val Lys Leu Val Val
 35 40 45
 Thr Lys Gly Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala
 50 55 60
 Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Ala Asp Ile Pro
 65 70 75 80
 Asp Tyr Ile Lys Leu Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ser
 85 90 95
 Ile Pro Phe Gln Asp Gln Ala Ser Cys Thr Val Thr Ser His Ile Arg
 100 105 110
 Met Lys Glu Glu Glu Arg His Phe Tyr Tyr Lys Ile His Phe Thr
 115 120 125
 Gly Glu Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly
 130 135 140
 Trp Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr
 145 150 155 160
 Gly His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Arg His Leu Arg
 165 170 175
 Val Asp Phe Asn Thr Ser Tyr Ile Pro Lys His Ser Ile Asn Met Pro
 180 185 190
 Asp Phe His Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu
 195 200 205
 Asp Tyr Asn His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg His His
 210 215 220
 Gly Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser
 225 230 235 240
 Thr Arg Thr Gly

<210> 59
 <211> 720
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 59
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatgg cgcgcctctg ccgttttctt tcgatatatt gacaccagca 180
 tttatgtatg gaaaccgtgt attcaccaa taccaggga atataccaga ctttttcaag 240
 cagaccgttt ctggtggcgg gtatacctgg gagcgaataa tgacttttga ggacgggggc 300

gtatgttgca	tcacaagcga	catcagtgtg	aaaggtgact	ctttcttcta	tgacattaag	360
ttcactggca	tgaactttcc	tcctcatggg	ccagtgatgc	agagaaagac	agtaaaatgg	420
gagccatcca	ctgaacgatt	gtatcttcgc	gacgggtgtg	tgacgggaca	tgacgacatg	480
actctgcggg	ttgaaggtgg	cggccattac	acatgtgtct	ttaaaactat	ttacagatcc	540
aagcactcga	tcaacatgcc	ggattttccat	tttatagacc	accgcattga	gattatggag	600
catgacgagg	actacaacca	tgtcaagctg	cgcgagattg	ctacagctcg	ccatcatggg	660
ctgaagggta	agcctatccc	taaccctctc	ctcggactcg	attctacgcg	taccggttag	720

<210> 60

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 60

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5				10						15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
	35						40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Gly	Asn	Ile	Pro	Asp	Phe	Phe	Lys
65					70				75						80
Gln	Thr	Val	Ser	Gly	Gly	Gly	Tyr	Thr	Trp	Glu	Arg	Ile	Met	Thr	Phe
			85					90					95		
Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly
		100						105					110		
Asp	Ser	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn	Phe	Pro	Pro
	115						120					125			
His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr
	130					135					140				
Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	His	Asp	Asp	Met
145					150				155						160
Thr	Leu	Arg	Val	Glu	Gly	Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys	Thr
			165					170						175	
Ile	Tyr	Arg	Ser	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe	Ile
		180						185					190		
Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn	His	Val
	195						200					205			
Lys	Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys
	210					215					220				
Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	
225					230					235					

<210> 61

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 61

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atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc      60
gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg      120
tctcttgaag tggatgaatg cgcgcctctg ccgttttctt tcgatatatt gacaccagca      180
tttatgtatg gaaaccgtgt attcaccaaa tacccaaaag agataccaga ctatttcaag      240
cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta      300
tggtgcatca caagcgacat cagtgtgaaa ggtgactctt tctactataa gattcacttc      360
actggcgagt ttctctctca tgggtccagt atgcagagaa agacagtaaa atgggagcca      420
tccactgaag taatgtatgt tgacgacaag agtgacgggt tgctgaaggg agatgtcaac      480
atggctctgt tgcttaaaga tggcggtcat tacacatgtg tctttaaaac tatttacaga      540
tccaagcact cgatcaacat gccggatttc cattttatag accaccgcat tgagattctg      600
ggcaaccagc aagacaagcc ggtcaagctg tacgagattg ctacagctcg ccatcatggg      660
ctgaagggta agcctatccc taaccctctc ctcggactcg attctacgcg taccgggttag      720

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<210> 62
 <211> 239
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

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<400> 62
Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1          5          10          15
Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
 20          25          30
Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35          40          45
Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50          55          60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65          70          75          80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85          90          95
Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
100          105          110
Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His Gly
115          120          125
Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu Val
130          135          140
Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val Asn
145          150          155          160
Met Ala Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys
165          170          175
Thr Ile Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe His Phe
180          185          190
Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val
195          200          205
Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys
210          215          220
Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
225          230          235

```

<210> 63
 <211> 516
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 63

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acttttaacg	gccacaaatt	tacgatcaaa	ggggaaggag	gaggataccc	ttacgaagga	120
gtacagttta	tgtctcttga	agtgggtgaat	ggcgcgcctc	tgacgttttc	tttcgatgta	180
ttgacaccac	aattacagta	tgaaaacaag	tcattcgtca	gctacccaaa	agagatacca	240
gactatttca	agcagacctt	tcctgaaggc	tatcactggg	agcgaataat	gacttttgag	300
gacgggggcg	tatgttgcac	cacaagcgac	atcagtgtga	aaggtgactc	tttctactat	360
aagattcact	tactggcgca	gtttcctcct	catggtccag	tgatgcagag	aaagacagta	420
aaatgggagc	catccactga	aaacatttat	cctcgcgacg	aatttctgga	gggagatgtc	480
aacatggctc	tgttgcttaa	agaggccgcc	atttga			516

<210> 64

<211> 171

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 64

Met	Ser	His	Ser	Lys	Ser	Val	Ile	Lys	Asp	Glu	Met	Phe	Ile	Lys	Ile
1				5				10						15	
His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Thr	Ile	Lys	Gly	Glu
			20					25					30		
Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val
		35					40					45			
Val	Asn	Gly	Ala	Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Gln
	50					55				60					
Leu	Gln	Tyr	Gly	Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Lys	Glu	Ile	Pro
65				70					75					80	
Asp	Tyr	Phe	Lys	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile
			85					90					95		
Met	Thr	Phe	Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser
		100					105					110			
Val	Lys	Gly	Asp	Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe
	115					120				125					
Pro	Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro
	130				135					140					
Ser	Thr	Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val
145			150					155						160	
Asn	Met	Ala	Leu	Leu	Lys	Glu	Ala	Ala	Ile						
			165				170								

<210> 65

<211> 714

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 65

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgттаacggc	60
------------	------------	------------	------------	------------	------------	----

gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	ccgttttctt	tcgatatatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tctactataa	gattcacttc	360
actggcgagt	ttcctcctca	tggtccagtg	atgcagagaa	agacagtaaa	atgggagcca	420
tccactgaaa	acatttatcc	tcgcgacgaa	tttctggagg	gagatgtcaa	catggctctg	480
ttgcttaaag	atggccgcca	tttgagagtt	gactttaaca	cttcttacat	acccaagaag	540
aaggtcgaga	atatgcctga	ctaccatttt	atagaccacc	gcattgagat	tctgggcaac	600
ccagaagaca	agccggtcaa	gctgtacgag	attgctacag	ctcgccatca	tgggctgaag	660
ggtaagccta	tccctaaccc	tctcctcgga	ctcgattcta	cgcgtaccgg	ttag	714

<210> 66

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 66

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70					75					80
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
			85						90					95	
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
			100					105					110		
Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly
		115					120					125			
Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Asn
	130					135					140				
Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn	Met	Ala	Leu
145				150					155						160
Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn	Thr	Ser	Tyr
			165					170						175	
Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe	Ile	Asp
		180					185						190		
His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val	Lys	Leu
	195						200					205			
Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro	Ile
	210				215						220				
Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly			
225					230					235					

<210> 67

<211> 639

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 67

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggaactgcac	tgtaaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgccctctg	ccgtttgggt	ggcatatatt	gtcaccacaa	180
ttacagtatg	gaaacaagtc	attcgtcagc	taccaggca	atataccaga	ctttttcaag	240
cagaccgttt	ctggtggcgg	gtataacctac	tataagattc	acttcactgg	cgagtttcct	300
cctaattggc	cagtgatgca	gaggaggata	cgaggatggg	agccatccac	tgaacgattg	360
tatcttcgcg	acggtgtgct	gacgggagat	atccacaaga	ctctgaaact	tagcgggtggc	420
cgccatttga	gagttgactt	taacacttct	tacataccca	agcactcgat	caacatgccg	480
gattttccatt	ttatagacca	ccgcattgat	attcggaagt	tcgacgaaaa	ttacatcaac	540
gtcgagcagg	acgagattgc	tacagctcgc	catcatgggc	tgaagggtaa	gcctatccct	600
aaccctctcc	tcggactcga	ttctacgcgt	accggttag			639

<210> 68

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 68

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
			20					25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Gly	Trp	His	Ile	Leu	Ser	Pro	Gln	Leu	Gln	Tyr	Gly
	50					55				60					
Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Gly	Asn	Ile	Pro	Asp	Phe	Phe	Lys
65				70					75					80	
Gln	Thr	Val	Ser	Gly	Gly	Gly	Tyr	Thr	Tyr	Tyr	Lys	Ile	His	Phe	Thr
			85				90						95		
Gly	Glu	Phe	Pro	Pro	Asn	Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly
			100				105						110		
Trp	Glu	Pro	Ser	Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr
	115						120				125				
Gly	Asp	Ile	His	Lys	Thr	Leu	Lys	Leu	Ser	Gly	Gly	Arg	His	Leu	Arg
	130					135				140					
Val	Asp	Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met	Pro
145				150					155					160	
Asp	Phe	His	Phe	Ile	Asp	His	Arg	Ile	Asp	Ile	Arg	Lys	Phe	Asp	Glu
			165				170							175	
Asn	Tyr	Ile	Asn	Val	Glu	Gln	Asp	Glu	Ile	Ala	Thr	Ala	Arg	His	His
		180					185						190		
Gly	Leu	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser
	195					200						205			
Thr	Arg	Thr	Gly												
	210														

<210> 69

<211> 741

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 69

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atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc      60
acttttaacg gccacaaatt tgagatcgaa ggggagggaa acggaaaacc ttacgcagga      120
acaaattttg taaaacttgt agtgacgaaa ggcgggcctc tgacgttttc tttcgatgta      180
ttgacaccag catttatgta tggaaaccgt gtattcacca aataccctct agagatacca      240
gactatttca agcagacctt tcctgaaggc tatcactggg agcgaataat gacttttgag      300
gacgggggag tatgttgcac cacaagcgac atcagtgtga aagggtgactc tttcttctat      360
gacattaagt tcaactggcga gaactttcct cctcatgggc cagtgatgca gagaaagaca      420
gtaaaatggg agccatccac tgaagtaatg tatgttgacg acaagagtga cgggtgtgctg      480
aaggggagatg tcaacatggc tctgttgctt aaagatggcg gctattacag agctgaattt      540
agaagttctt acaaaggcaa gaagaaggctc gagaatatgc ctgactacca ttttatagac      600
caccgcattg agattatgga gcatgacgag gactacaacc atgtcaagct gcgcgagatt      660
gctacagctc gccatcatgg gctgaagggt aagcctatcc ctaaccctct cctcgggactc      720
gattctacgc gtaccggtta g                                     741
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<210> 70

<211> 246

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 70

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Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
 1          5          10          15
His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
          20          25          30
Gly Asn Gly Lys Pro Tyr Ala Gly Thr Asn Phe Val Lys Leu Val Val
          35          40          45
Thr Lys Gly Gly Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala
          50          55          60
Phe Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro
65          70          75          80
Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile
          85          90          95
Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
          100          105          110
Val Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn
          115          120          125
Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu
          130          135          140
Pro Ser Thr Glu Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu
145          150          155          160
Lys Gly Asp Val Asn Met Ala Leu Leu Leu Lys Asp Gly Gly Tyr Tyr
          165          170          175
Arg Ala Glu Phe Arg Ser Ser Tyr Lys Gly Lys Lys Lys Val Glu Asn
          180          185          190
Met Pro Asp Tyr His Phe Ile Asp His Arg Ile Glu Ile Met Glu His
          195          200          205
Asp Glu Asp Tyr Asn His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg
210          215          220
```

His His Gly Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu
 225 230 235 240
 Asp Ser Thr Arg Thr Gly
 245

<210> 71
 <211> 462
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 71
 atgatgaccg atctgcatct ggactgcact gttaacggcg acaaatttac gatcaaaggg 60
 gaaggaggag gataccctta cgaaggagta cagtttatgt ctcttgaagt ggtgaatggc 120
 gcgcctctgc cgttttcttt cgatatattg acaccacaat tacagtatgg aaacaagtca 180
 ttctgcagct acccaaaaga gataccagac tatttcaagc agacctttcc tgaaggctat 240
 cactgggagc gaataatgac ttttgaggac gggggcgat gttgcatcac aagcgacatc 300
 agtgtgaaag gtgactcttt ctactataag attcacttca ctggcgagtt tcctcctcat 360
 ggtccagtga tgcagagaaa gacagtaaaa tgggagccat ccactgaagt aatgtatgtt 420
 gacgacaaga gtgacggtgt gcgaaggac atgacgacat ga 462

<210> 72
 <211> 153
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 72
 Met Met Thr Asp Leu His Leu Asp Cys Thr Val Asn Gly Asp Lys Phe
 1 5 10 15
 Thr Ile Lys Gly Glu Gly Gly Tyr Pro Tyr Glu Gly Val Gln Phe
 20 25 30
 Met Ser Leu Glu Val Val Asn Gly Ala Pro Leu Pro Phe Ser Phe Asp
 35 40 45
 Ile Leu Thr Pro Gln Leu Gln Tyr Gly Asn Lys Ser Phe Val Ser Tyr
 50 55 60
 Pro Lys Glu Ile Pro Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr
 65 70 75 80
 His Trp Glu Arg Ile Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile
 85 90 95
 Thr Ser Asp Ile Ser Val Lys Gly Asp Ser Phe Tyr Tyr Lys Ile His
 100 105 110
 Phe Thr Gly Glu Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr
 115 120 125
 Val Lys Trp Glu Pro Ser Thr Glu Val Met Tyr Val Asp Asp Lys Ser
 130 135 140
 Asp Gly Val Arg Arg Asp Met Thr Thr
 145 150

<210> 73
 <211> 726
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 73

atgaagggg	tgaaggaagt	aatgaagatc	agtctggaga	tgagggg	cgctgttaacggc	60
caccactttg	agatcgaagg	ggagggaaac	ggaaaacctt	acgcaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgctctg	ccgttttctt	tcgatatatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactggggag	cgaataatga	cttttgagga	cgggggcgta	300
tggttgcata	caagccacat	caggatgaaa	gaggaagagg	agcggcattt	ctactataag	360
attcacttca	ctggcgagtt	tcctcctcat	ggtccagtga	tgagagaaa	gacagtaaaa	420
tgaggagccat	ccactgaaaa	catttatcct	cgcgacgaat	ttctggaggg	agatgtcaac	480
atggctctgt	tgcttaaaga	tgccgccc	ttgagagttg	actttaacac	ttcttacata	540
cccaagaaga	aggtcgagaa	tatgcctgac	taccatttta	tagaccaccg	cattgagatt	600
atggagcatg	acgaggacta	caaccatgtc	aagctgcgcg	agattgctac	agctcgccat	660
catgggctga	agggtgaagcc	tatccctaac	cctctcctcg	gactcgattc	tacgcgtacc	720
ggtag						726

<210> 74

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 74

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Glu	Gly
1				5					10					15	
Ala	Val	Asn	Gly	His	His	Phe	Glu	Ile	Glu	Gly	Glu	Gly	Asn	Gly	Lys
		20						25					30		
Pro	Tyr	Ala	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
		50				55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70					75					80
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
			85					90					95		
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	His	Ile	Arg	Met	Lys	Glu	Glu
			100					105					110		
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro
		115					120					125			
Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser
		130				135					140				
Thr	Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn
145					150					155					160
Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn
			165					170						175	
Thr	Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His
		180					185						190		
Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn
		195					200					205			
His	Val	Lys	Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys
	210					215					220				
Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr

<212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 77
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 caccacttta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatgg cgcgcctctg ccgttttctt tcgatataatt gacaccagca 180
 tttatgtatg gaaaccgtgt attcaccaaa tacccaaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta 300
 tgttgcacat caagcgacat cagtgtgaaa ggtgactctt tcttctatga cattaagtctc 360
 actggcatga actttcctcc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag 420
 ccatccactg aacgattgta tcttcgagac ggtgtgctga cgggacatga cgacatgact 480
 ctgcggttg aaggtggcgg ccattacaca tgtgtcttta aaactattta cagatccaag 540
 aagaaggtcg agaatatgcc tgactaccat tttatagacc accgcattga gattctgggc 600
 aaccagaag acaagccgtt caagctgtac gagattgcta cagctcgcca tcatgggctg 660
 aagggtgaagc ctatccctaa ccctctcctc ggactcgatt ctacgcgtac cggttag 717

<210> 78
 <211> 238
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 78
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Glu Gly
 1 5 10 15
 Ala Val Asn Gly His His Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50 55 60
 Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85 90 95
 Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro His
 115 120 125
 Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
 130 135 140
 Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly His Asp Asp Met Thr
 145 150 155 160
 Leu Arg Val Glu Gly Gly Gly His Tyr Thr Cys Val Phe Lys Thr Ile
 165 170 175
 Tyr Arg Ser Lys Lys Lys Val Glu Asn Met Pro Asp Tyr His Phe Ile
 180 185 190
 Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val Lys
 195 200 205
 Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys Pro
 210 215 220

Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
 225 230 235

<210> 79
 <211> 726
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 79
 atgaagggg tgaaggaagt aatgaagatc agtctggaga tggagggcgc tgttaacggc 60
 caccacttta cgatcaaagg ggaaggagga ggataccctt acgaaggaac aaattttgta 120
 aaacttgtag tgacgaaagg cgggcctctg ccgttttctt tcgatataatt gacaccacaa 180
 ttacagtatg gaaacaagtc attcgtcagc tacccaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaaaaatga cttatgagga cgggggcata 300
 agtaacgtcc gaagccacat caggatgaaa gaggaagagg agcggcattt cttctatgac 360
 attaagttca ctggcatgaa ctttcctcct catggtccag tgatgcagag aaagacagta 420
 aaatgggagc catccactga aaacatttat cctcgcgacg aatttctgga gggacatgac 480
 gacatgactc tgcggggttga aggtggcggc cattacacat gtgtctttaa aactattttac 540
 agatccaagc actcgatcaa catgccggat ttccatttta tagaccaccg cattgagatt 600
 atggagcatg acgaggacta caaccatgtc aagctgcgcg agattgctac agctcgccat 660
 catgggctga agggtaagcc tatccctaac cctctcctcg gactcgattc tacgcgtacc 720
 ggttag 726

<210> 80
 <211> 241
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 80
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Glu Gly
 1 5 10 15
 Ala Val Asn Gly His His Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Thr Asn Phe Val Lys Leu Val Val Thr Lys Gly Gly
 35 40 45
 Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Gln Leu Gln Tyr Gly
 50 55 60
 Asn Lys Ser Phe Val Ser Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Lys Met Thr Tyr Glu
 85 90 95
 Asp Gly Gly Ile Ser Asn Val Arg Ser His Ile Arg Met Lys Glu Glu
 100 105 110
 Glu Glu Arg His Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe
 115 120 125
 Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro
 130 135 140
 Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly His Asp
 145 150 155 160
 Asp Met Thr Leu Arg Val Glu Gly Gly Gly His Tyr Thr Cys Val Phe
 165 170 175

Lys Thr Ile Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe His
 180 185 190
 Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn
 195 200 205
 His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu Lys
 210 215 220
 Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr
 230 235 240
 Gly

<210> 81
 <211> 726
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 81
 atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc 60
 acttttaacg gccacaaatt tgagatcgaa ggggagggaa acggaacc ttacgcagga 120
 gtacagttta tgtctcttga agtgggtgaat ggcgcgctc tgccgttttc ttctgatata 180
 ttgacaccag catttatgta tggaaaccgt gtattcacca aatacccaaa agagatacca 240
 gactatttca agcagacctt tcctgaaggc tatcactggg agcgaataat gacttttgag 300
 gacgggggcg tatgttgcac cacaagcgac atcagtgtga aaggtgactc tttcttctat 360
 gacattaagt tcactggcat gaactttcct cctaattggtc cagtgatgca gaggaggata 420
 cgaggatggg agccatccac tgaaaacatt tatcctcgcg acgaatttct ggagggacat 480
 gacgacatga ctctgcgggt tgaagggtggc ggccattaca catgtgtctt taaaactatt 540
 tacagatcca agcactcgat caacatgccg gatttccatt ttatagacca ccgcattgag 600
 attctgggca acccagaaga caagcgggtc aagctgtacg agattgctac agctcgccat 660
 catgggctga agggtaagcc tatccctaac cctctcctcg gactcgattc tacgcgtacc 720
 ggtag 726

<210> 82
 <211> 241
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 82
 Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
 1 5 10 15
 His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
 20 25 30
 Gly Asn Gly Lys Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val
 35 40 45
 Val Asn Gly Ala Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala
 50 55 60
 Phe Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro
 65 70 75 80
 Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile
 85 90 95
 Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
 100 105 110

Val Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn
115 120 125
Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp Glu
130 135 140
Pro Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly His
145 150 155 160
Asp Asp Met Thr Leu Arg Val Glu Gly Gly His Tyr Thr Cys Val
165 170 175
Phe Lys Thr Ile Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe
180 185 190
His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys
195 200 205
Pro Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys
210 215 220
Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr
225 230 235 240
Gly

<210> 83
<211> 717
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 83
atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
gacaaatttg agatcgaagg ggagggaaac ggaaaacctt acgcaggaac aaattttgta 120
aaacttgtag tgacgaaagg cgggcctctg acgttttctt tcgatgtatt gacaccacaa 180
ttacagtatg gaaacaagtc attcgtcagc taccctaaaag agataccaga ctatttcaag 240
cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggctga 300
tgttgcatca caagcgacat cagtgtgaaa ggtgactctt tctactataa gattcacttc 360
actggcgagt ttctctctca tgggtccagt atgcagagaa agacagtaaa atgggagcca 420
tccactgaaa acatttatcc tcgcgacgaa tttctggagg gacatgacga catgactctg 480
cgggttgaa gtggcggcta ttacagagct gaatttagaa gttcttacia aggcaagaag 540
aacctcacgc ttccggattg cttctattat gtagacacca aacttgagat tatggagcat 600
gacgaggact acaaccatgt caagctgcgc gagattgcta cagctcgcca tcatgggctg 660
aagggttaagc ctatccctaa ccctctctc ggactcgatt ctacgcgtac cgggttag 717

<210> 84
<211> 238
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 84
Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
1 5 10 15
Thr Val Asn Gly Asp Lys Phe Glu Ile Glu Gly Glu Gly Asn Gly Lys
20 25 30
Pro Tyr Ala Gly Thr Asn Phe Val Lys Leu Val Val Thr Lys Gly Gly
35 40 45
Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Gln Leu Gln Tyr Gly

50	Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
				85	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Val	Lys	Asp
				100						105				110		
	Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly
			115						120					125		
	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Asn
		130					135						140			
	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	His	Asp	Asp	Met	Thr	Leu
145						150					155					160
	Arg	Val	Glu	Gly	Gly	Gly	Tyr	Tyr	Arg	Ala	Glu	Phe	Arg	Ser	Ser	Tyr
				165						170					175	
	Lys	Gly	Lys	Lys	Asn	Leu	Thr	Leu	Pro	Asp	Cys	Phe	Tyr	Tyr	Val	Asp
				180					185					190		
	Thr	Lys	Leu	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn	His	Val	Lys
			195					200					205			
	Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro
		210				215						220				
	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly		
225					230						235					

<210> 85
 <211> 546
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 85	
ttgacaccag catttatgta tggaaaccgt gtattcacca aatacccagc cgatatacca	60
gactatatca agctgtcctt tcctgagggc tttacctggg agcgaagcat tccttttcaa	120
gaccaggcct catgtaccgt cacaagcgac atcagtatga aaagtaacaa ctgtttctac	180
tataagattc acttcactgg cgagtttcct cctaattggc cagtgatgca gaggaggata	240
cgaggatggg agccatccac tgaacgattg tatcttcgcg acggtgtgct gacgggagat	300
atccacaaga ctctgaaact tagcgggtggc ggctattaca gagctgaatt tagaagttct	360
tacaaaggca agcactcgat caacatgccg gatttccatt ttatagacca ccgcattgag	420
attctgggca acccagaaga caagccggtc aagctgtacg agattgctac agctcgccat	480
catgggctga agggtaagcc tatccctaac cctctcctcg gactcgattc tacgcgtacc	540
ggttag	546

<210> 86
 <211> 181
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 86	
Met Thr Pro Ala Phe Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro	
1 5 10 15	
Ala Asp Ile Pro Asp Tyr Ile Lys Leu Ser Phe Pro Glu Gly Phe Thr	
20 25 30	

Trp Glu Arg Ser Ile Pro Phe Gln Asp Gln Ala Ser Cys Thr Val Thr
 35 40 45
 Ser Asp Ile Ser Met Lys Ser Asn Asn Cys Phe Tyr Tyr Lys Ile His
 50 55 60
 Phe Thr Gly Glu Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile
 65 70 75 80
 Arg Gly Trp Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val
 85 90 95
 Leu Thr Gly Asp Ile His Lys Thr Leu Lys Leu Ser Gly Gly Gly Tyr
 100 105 110
 Tyr Arg Ala Glu Phe Arg Ser Ser Tyr Lys Gly Lys His Ser Ile Asn
 115 120 125
 Met Pro Asp Phe His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn
 130 135 140
 Pro Glu Asp Lys Pro Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His
 145 150 155 160
 His Gly Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp
 165 170 175
 Ser Thr Arg Thr Gly
 180

<210> 87
 <211> 717
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 87
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatg cgcgccctctg ccgttttctt tcgatataatt gacaccagca 180
 tttatgtatg gaaaccgtgt attcaccaaa taccagccg atataccaga ctatatcaag 240
 ctgtcctttc ctgagggtt tacctgggag cgaataatga cttttgagga cgggggcgta 300
 tgttgcatca caagcgacat cagtgtgaaa ggtgactctt tcttctatga cattaagtgc 360
 actggcatga actttcctcc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag 420
 ccatccactg aaaacattta tcctcgcgac gaatttctgg agggagatgt caacatggct 480
 ctgttgctta aagatggcgg ccattacaca tgtgtcttta aaactattta cagatccaag 540
 cactcgatca acatgccgga tttccatttt atagaccacc gcattgatat tcggaagttc 600
 gacgaaaatt acatcaacgt cgagcaggac gagattgcta cagctcgcca tcatgggctg 660
 aagggttaagc ctatccctaa ccctctcctc ggactcgatt ctacgcgtac cggtttag 717

<210> 88
 <211> 238
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 88
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala

<400> 90
Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
1 5 10 15
His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Thr Ile Lys Gly Glu
20 25 30
Gly Gly Gly Tyr Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val
35 40 45
Val Asn Gly Ala Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala
50 55 60
Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Lys Glu Ile Pro
65 70 75 80
Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Lys
85 90 95
Met Thr Tyr Glu Asp Gly Gly Ile Ser Asn Val Arg Ser Asp Ile Ser
100 105 110
Val Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn
115 120 125
Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu
130 135 140
Pro Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp
145 150 155 160
Val Asn Met Ala Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp
165 170 175
Phe Asn Thr Ser Tyr Ile Pro Lys Lys Val Glu Asn Met Pro Asp
180 185 190
Tyr His Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp
195 200 205
Tyr Asn His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg His His Gly
210 215 220
Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr
225 230 235 240
Arg Thr Gly

<210> 91
<211> 723
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 91
atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
gacaaattta cgaatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
tctcttgaag tgggtgaatgg cgcgcctctg ccgttttctt tcgatataatt gacaccacaa 180
ttacagtatg gaaacaagtc attcgtcagc taccagccg atataccaga ctatatcaag 240
ctgtcctttc ctgagggctt tacctgggag cgaataatga cttttgagga cgggggcgta 300
tggtgcatca caagcgacat cagtgtgaaa ggtgactctt tctactataa gattcacttc 360
actggcgagt ttctcctca tgggtccagt atgcagagaa agacagtaaa atgggagcca 420
tccactgaag taatgtatgt tgacgacaag agtgacgggtg tgctgaaggg agatgtcaac 480
atggctctgt tgcttaaaga tggcggccat tacacatgtg tctttaaaac tatttacaga 540
tccaagaaga aggtcgagaa tatgcctgac taccatttta tagaccaccg cattgagatt 600
ctgggcaacc cagaagacaa gccggtcaag ctgtacgaga ttgctacagc tcgccatcat 660
gggctgaagg gtaagcctat ccctaaccct ctctcggac tcgattctac gcgtaccggt 720
tag 723

<210> 92
 <211> 240
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 92
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Gln Leu Gln Tyr Gly
 50 55 60
 Asn Lys Ser Phe Val Ser Tyr Pro Ala Asp Ile Pro Asp Tyr Ile Lys
 65 70 75 80
 Leu Ser Phe Pro Glu Gly Phe Thr Trp Glu Arg Ile Met Thr Phe Glu
 85 90 95
 Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His Gly
 115 120 125
 Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu Val
 130 135 140
 Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val Asn
 145 150 155 160
 Met Ala Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys
 165 170 175
 Thr Ile Tyr Arg Ser Lys Lys Lys Val Glu Asn Met Pro Asp Tyr His
 180 185 190
 Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro
 195 200 205
 Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly
 210 215 220
 Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
 225 230 235 240

<210> 93
 <211> 732
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 93
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggagggcgc tgttaacggc 60
 caccacttta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatg cgcgctctg ccgttttctt tcgatataatt gacaccagca 180
 tttatgtatg gaaaccgtgt attcacaaa tacccaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tactggggag cgaaaaatga cttatgagga cgggggcata 300
 agtaacgtcc gaagccacat caggatgaaa gaggaagagg agcggcattt ctactataag 360
 attcacttca ctggcgagtt tcctcctcat ggtccagtga tgcagagaaa gacagtaaaa 420
 tgggagccat ccactgaagt aatgtatgtt gacgacaaga gtgacggtgt gctgaaggga 480

gatgtcaaca	tggtctctgtt	gcttaaagat	ggccgccatt	tgagagttga	ctttaacact	540
tcttacatac	ccaagaagaa	ggtcgagaat	atgcctgact	accattttat	agaccaccgc	600
attgagattc	tgggcaaccc	agaagacaag	ccggtcaage	tgtacgagat	tgctacagct	660
cgccatcatg	ggctgaagg	taagcctatc	cctaaccctc	tcctcggact	cgattctacg	720
cgtaccggtt	ag					732

<210> 94
 <211> 243
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 94

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Glu	Gly
1				5					10					15	
Ala	Val	Asn	Gly	His	His	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70					75					80
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu
				85					90					95	
Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	His	Ile	Arg	Met	Lys	Glu	Glu
			100					105					110		
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro
		115					120					125			
Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser
	130					135					140				
Thr	Glu	Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys	Gly
145					150					155					160
Asp	Val	Asn	Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val
			165					170					175		
Asp	Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro
		180					185						190		
Asp	Tyr	His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu
	195					200					205				
Asp	Lys	Pro	Val	Lys	Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly
	210				215						220				
Leu	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr
225				230					235						240
Arg	Thr	Gly													

<210> 95
 <211> 744
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 95

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atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc      60
acttttaacg gccacaaatt tgagatcgaa ggggagggaa acggaacc ttacgcagga      120
gtacagttta tgtctcttga agtgggtgaat ggcgcgcctc tgacgttttc tttcgatgta      180
ttgacaccag catttcagta tggaaaccgt acattcacca aatacccaaa agagatacca      240
gactatttca agcagacctt tcctgaaggc tatcactggg agcgaataat gacttttgag      300
gacgggggag tatgttgcac cacaagcgac atcagtatga aaagtaacaa ctgtttctac      360
tataagattc acttcactgg cgagtttcct cctcatgggc cagtgatgca gagaaagaca      420
gtaaaatggg agccatcca c tgaaaacatt tatcctcgcg acgaatttct ggaggagat      480
gtcaacatgg ctctgttgct taaagatggc cgccatttga gagttgactt taacacttct      540
tacataccca agaagaaggt cgagaatatg cctgactacc attttataga ccaccgcatt      600
gagattatgg agcatgacga ggactacaac catgtcaagc tgcgcgagtg tgctgtagct      660
cgctattctc tgctgcctga gaagaacaag ggtaagccta tccctaacc tctcctcgga      720
ctcgattcta cgcgtaccgg ttag      744

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<210> 96
 <211> 247
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

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<400> 96
Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
1          5          10          15
His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Glu Ile Glu Gly Glu
20          25          30
Gly Asn Gly Lys Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val
35          40          45
Val Asn Gly Ala Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala
50          55          60
Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Lys Glu Ile Pro
65          70          75          80
Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile
85          90          95
Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
100          105          110
Met Lys Ser Asn Asn Cys Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu
115          120          125
Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu
130          135          140
Pro Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp
145          150          155          160
Val Asn Met Ala Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp
165          170          175
Phe Asn Thr Ser Tyr Ile Pro Lys Lys Val Glu Asn Met Pro Asp
180          185          190
Tyr His Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp
195          200          205
Tyr Asn His Val Lys Leu Arg Glu Cys Ala Val Ala Arg Tyr Ser Leu
210          215          220
Leu Pro Glu Lys Asn Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly
225          230          235          240
Leu Asp Ser Thr Arg Thr Gly
245

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<210> 97

<211> 558
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 97
 atggaaaccg tgtattcacc aaataccag gcaatatacc agactttttc aagcagaccg 60
 tttctggggc gggatatacc ggagcgaaaa atgacttatg aggacggggg cataagtaac 120
 gtccgaagcc acatcaggat gaaagaggaa gaggagcggc atttctacta taagattcac 180
 ttcactggcg agtttctctc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag 240
 ccatccactg aagtaatgta tgttgacgac aagagtgcag gtgtgctgaa gggacatgac 300
 gacatgactc tgcgggttga aggtggcggc tattacagag ctgaatttag aagttcttac 360
 aaaggcaaga agaaggtcga gaatatgcct gactaccatt ttatagacca ccgcattgag 420
 attctgggca acccagaaga caagccggtc aagctgtacg agtgtgctgt agctcgctat 480
 tctctgctgc ctgagaagaa caagggttaag cctatcccta accctctcct cggactcgat 540
 tctacgcgta ccggttag 558

<210> 98
 <211> 185
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 98
 Met Glu Thr Val Tyr Ser Pro Asn Thr Gln Ala Ile Tyr Gln Thr Phe
 1 5 10 15
 Ser Ser Arg Pro Phe Leu Gly Arg Val Tyr Arg Glu Arg Lys Met Thr
 20 25 30
 Tyr Glu Asp Gly Gly Ile Ser Asn Val Arg Ser His Ile Arg Met Lys
 35 40 45
 Glu Glu Glu Glu Arg His Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu
 50 55 60
 Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu
 65 70 75 80
 Pro Ser Thr Glu Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu
 85 90 95
 Lys Gly His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Gly Tyr Tyr
 100 105 110
 Arg Ala Glu Phe Arg Ser Ser Tyr Lys Gly Lys Lys Val Glu Asn
 115 120 125
 Met Pro Asp Tyr His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn
 130 135 140
 Pro Glu Asp Lys Pro Val Lys Leu Tyr Glu Cys Ala Val Ala Arg Tyr
 145 150 155 160
 Ser Leu Leu Pro Glu Lys Asn Lys Gly Lys Pro Ile Pro Asn Pro Leu
 165 170 175
 Leu Gly Leu Asp Ser Thr Arg Thr Gly
 180 185

<210> 99
 <211> 720
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 99

gtgaaggaag	taatgaagat	cagtctggag	atggactgca	ctgttaacgg	cgacaaattt	60
gagatcgaag	gggagggaaa	cggaaaacct	tacgcaggaa	caaattttgt	aaaacttgta	120
gtgacgaaag	gcgggcctct	gacgttttct	ttcgatgtat	tgacaccaca	attacagtat	180
ggaaacaagt	cattcgtcag	ctaccagacc	gatataccag	actatatcaa	gctgtccttt	240
cctgagggct	ttacctggga	gcgaagcatt	ccttttcaag	accaggcctc	atgtaccgtc	300
acaagcgaca	tcagtgtgaa	aggtgactct	ttctactata	agattcactt	cactggcgag	360
tttcctcctc	atgggtccagt	gatgcagaga	aagacagtaa	aatgggagcc	atccactgaa	420
cgattgtatc	ttcgcgacgg	tgtgctgacg	ggacatgacg	acatgactct	gcggggtgaa	480
ggtggccgcc	atttgagagt	tgactttaac	acttcttaca	tacccaagaa	gaacctcacg	540
cttcgggatt	gcttctatta	tgtagacacc	aaacttgata	ttcgggaagt	cgacgaaaat	600
tacatcaacg	tcgagcagga	cgagtgtgct	gtagctcgct	attctctgct	gcctgagaag	660
aacaagggta	agcctatccc	taaccctctc	ctcggactcg	attctacgcg	taccggttag	720

<210> 100

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 100

Met	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys	Thr	Val	Asn
1				5					10					15	
Gly	Asp	Lys	Phe	Glu	Ile	Glu	Gly	Glu	Gly	Asn	Gly	Lys	Pro	Tyr	Ala
			20					25					30		
Gly	Thr	Asn	Phe	Val	Lys	Leu	Val	Val	Thr	Lys	Gly	Gly	Pro	Leu	Thr
		35					40					45			
Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Gln	Leu	Gln	Tyr	Gly	Asn	Lys	Ser
	50					55				60					
Phe	Val	Ser	Tyr	Pro	Ala	Asp	Ile	Pro	Asp	Tyr	Ile	Lys	Leu	Ser	Phe
65					70				75					80	
Pro	Glu	Gly	Phe	Thr	Trp	Glu	Arg	Ser	Ile	Pro	Phe	Gln	Asp	Gln	Ala
				85				90						95	
Ser	Cys	Thr	Val	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp	Ser	Phe	Tyr
			100					105					110		
Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly	Pro	Val	Met
		115					120					125			
Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Arg	Leu	Tyr	Leu
	130					135					140				
Arg	Asp	Gly	Val	Leu	Thr	Gly	His	Asp	Asp	Met	Thr	Leu	Arg	Val	Glu
145					150					155					160
Gly	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys
				165					170						175
Lys	Asn	Leu	Thr	Leu	Pro	Asp	Cys	Phe	Tyr	Tyr	Val	Asp	Thr	Lys	Leu
			180					185					190		
Asp	Ile	Arg	Lys	Phe	Asp	Glu	Asn	Tyr	Ile	Asn	Val	Glu	Gln	Asp	Glu
		195					200					205			
Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu	Leu	Pro	Glu	Lys	Asn	Lys	Gly	Lys
	210					215						220			
Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	
225					230					235					

<210> 101
 <211> 714
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 101
 atgaagggg tgaaggaagt aatgaagatc agtctggaga tggagggcgc tggttaacggc 60
 caccacttta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatgg cgcgcctctg ccgttttctt tcgatatatt gacaccagca 180
 tttatgtatg gaaaccgtgt attcaccaaa tacccaaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta 300
 tggttgcata caagcgacat cagtgtgaaa ggtgactctt tcttctatga cattaagtgc 360
 actggcatga actttcctcc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag 420
 ccatccactg aaaacattta tcctcgcgac gaatttctgg agggagatgt caacatggct 480
 ctggttgctta aagatggcgg ctattacaga gctgaattta gaagttctta caaaggcaag 540
 cactcgatca acatgccgga tttccatttt atagaccacc gcattgagat tctgggcaac 600
 ccagaagaca agccgggtcaa gctgtacgag attgctacag ctcgccatca tgggctgaag 660
 ggtaagccta tccctaacc tctcctcgga ctcgattcta cgcgtaccgg ttag 714

<210> 102
 <211> 237
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 102
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Glu Gly
 1 5 10 15
 Ala Val Asn Gly His His Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50 55 60
 Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85 90 95
 Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro His
 115 120 125
 Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
 130 135 140
 Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val Asn Met Ala
 145 150 155 160
 Leu Leu Leu Lys Asp Gly Gly Tyr Tyr Arg Ala Glu Phe Arg Ser Ser
 165 170 175
 Tyr Lys Gly Lys His Ser Ile Asn Met Pro Asp Phe His Phe Ile Asp
 180 185 190
 His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val Lys Leu

	195		200		205										
Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro	Ile
	210					215					220				
Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly			
225					230					235					

<210> 103
 <211> 717
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 103

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggagggcgc	tgtaaaggc	60
caccactttg	agatcgaagg	ggagggaaac	ggaaaacctt	acgcaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgctctg	ccgttttctt	tcgatataatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tcttctatga	cattaagttc	360
actggcatga	actttcctcc	tcatgggtcca	gtgatgcaga	gaaagacagt	aaaatgggag	420
ccatccactg	aaaacattta	tcctcgcgac	gaatttctgg	agggagatgt	caacatggct	480
ctgttgctta	aagatggcgg	ccattacaca	tgtgtcttta	aaactattta	cagatccaag	540
cactcgatca	acatgccgga	tttccatttt	atagaccacc	gcattgagat	tatggagcat	600
gacgaggact	acaaccatgt	caagctgcgc	gagattgcta	cagctcgcca	tcatgggctg	660
aagggtgaagc	ctatccctaa	ccctctcctc	ggactcgatt	ctacgcgtac	cggttag	717

<210> 104
 <211> 238
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 104

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Glu	Gly
1				5					10					15	
Ala	Val	Asn	Gly	His	His	Phe	Glu	Ile	Glu	Gly	Glu	Gly	Asn	Gly	Lys
		20						25					30		
Pro	Tyr	Ala	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70				75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
			85					90					95		
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
			100					105					110		
Ser	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn	Phe	Pro	Pro	His
		115					120					125			
Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu
	130					135					140				
Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn	Met	Ala
145					150					155					160

Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys Thr Ile
 165 170 175
 Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe His Phe Ile Asp
 180 185 190
 His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn His Val Lys
 195 200 205
 Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys Pro
 210 215 220
 Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
 225 230 235

<210> 105

<211> 723

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 105

atgaagggg	tgaaggaagt	aatgaagatc	agtctggaga	tggaactgcac	tgttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggaac	acagacttta	120
catcttacag	agaaggaagg	caagcctctg	ccgttttctt	tcgatatatt	gacaccacaa	180
ttacagtatg	gaaacaagtc	attcgtcagc	taccagccg	atataccaga	ctatatcaag	240
ctgtcctttc	ctgagggcct	tacctgggag	cgaagcattc	cttttcaaga	ccaggcctca	300
tgtaccgtca	caagccacat	caggatgaaa	gaggaagagg	agcggcattt	ctactataag	360
attcacttca	ctggcgagtt	tcctccta	gggtccagtga	tgagaggagg	gatacaggga	420
tgggagccat	ccactgaaaa	catttatcct	cgcgacgaat	ttctggaggg	agatatccac	480
aagactctga	aacttagcgg	tggccgcca	ttgagagttg	actttaacac	ttcttacata	540
cccaagcact	cgatcaacat	gccggatttc	cattttatag	accaccgc	tgatattcgg	600
aagttcgacg	aaaattacat	caacgtcgag	caggacgaga	ttgctacagc	tcgccatcat	660
gggctgaagg	gtaagcctat	ccctaaccct	ctcctcggac	tcgattctac	gcgtaccggt	720
tag						723

<210> 106

<211> 240

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 106

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5				10						15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20					25					30			
Pro	Tyr	Glu	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
		35				40				45					
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Gln	Leu	Gln	Tyr	Gly
	50				55				60						
Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Ala	Asp	Ile	Pro	Asp	Tyr	Ile	Lys
65				70			75							80	
Leu	Ser	Phe	Pro	Glu	Gly	Phe	Thr	Trp	Glu	Arg	Ser	Ile	Pro	Phe	Gln
			85				90					95			
Asp	Gln	Ala	Ser	Cys	Thr	Val	Thr	Ser	His	Ile	Arg	Met	Lys	Glu	Glu
		100					105					110			

Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro
		115					120					125			
Pro	Asn	Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu	Pro	Ser
	130					135					140				
Thr	Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Ile	His
145					150					155					160
Lys	Thr	Leu	Lys	Leu	Ser	Gly	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn
			165						170					175	
Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe
			180						185				190		
Ile	Asp	His	Arg	Ile	Asp	Ile	Arg	Lys	Phe	Asp	Glu	Asn	Tyr	Ile	Asn
	195						200					205			
Val	Glu	Gln	Asp	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly
	210					215					220				
Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly
225					230					235					240

<210> 107

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 107

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggaac	acagacttta	120
catcttacag	agaaggaagg	caagcctctg	acgttttctt	tcgatgtatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tgttgcacat	caagccacat	caggatgaaa	gaggaagagg	agcggcattt	ctactataag	360
attcacttca	ctggcgagtt	tcctcctaatt	ggtccagtga	tgcagaggag	gatacgagga	420
tgggagccat	ccactgaaaa	cattttatcct	cgcgacgaat	ttctggaggg	acatgacgac	480
atgactctgc	gggttgaagg	tggcggctat	tacagagctg	aatttagaag	ttcttacaaa	540
ggcaagcact	cgatcaacat	gccggatttc	cattttatag	accaccgcat	tgagattctg	600
ggcaaccag	aagacaagcc	ggtcaagctg	tacgagattg	ctacagctcg	ccatcatggg	660
ctgaagggta	agcctatccc	taaccctctc	ctcggactcg	attctacgcg	taccggttag	720

<210> 108

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 108

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
	35						40					45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys

65					70					75					80
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
				85					90					95	
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	His	Ile	Arg	Met	Lys	Glu	Glu
			100					105					110		
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro
			115				120					125			
Pro	Asn	Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu	Pro	Ser
			130			135					140				
Thr	Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	His	Asp	Asp
145					150					155					160
Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Gly	Tyr	Tyr	Arg	Ala	Glu	Phe	Arg
				165					170					175	
Ser	Ser	Tyr	Lys	Gly	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe
			180					185					190		
Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val
			195				200					205			
Lys	Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys
			210				215				220				
Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	
225					230					235					

<210> 109

<211> 747

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 109

atgagtcatt	ccaagagtgt	gatcaaggac	gaaatgttca	tcaagattca	tctggaaggc	60
acttttaacg	gccacaaatt	tacgatcaaa	ggggaaggag	gaggataccc	ttacgaagga	120
gtacagttta	tgtctcttga	agtgggtgaat	ggcgcgctc	tgccgtttgg	ttggcatata	180
ttgtcaccag	catttatgta	tggaaccgt	gtattcacca	aatacccaa	agagatacca	240
gactatttca	agcagacctt	tcctgaaggc	tatcactggg	agcgaataat	gacttttgag	300
gacgggggcg	tatgttgcat	cacaagcgac	atcagtgtga	aaggtgactc	tttcttctat	360
gacattaagt	tcactggcat	gaactttcct	cctaattggtc	cagtgatgca	gaggaggata	420
cgaggatggg	agccatccac	tgaagtaatg	tatgttgacg	acaagagtga	cggtgtgctg	480
aagggacatg	acgacatgac	tctgcgggtt	gaaggtggcg	gccattacac	atgtgtcttt	540
aaaactat	acagatccaa	gcactcgatc	aacatgccgg	atttccattt	tatagaccac	600
cgcattgaga	ttctgggcaa	cccagaagac	aagccgggtc	agctgtacga	gtgtgctgta	660
gctcgctatt	ctctgctgcc	tgagaagaac	aagggtgaagc	ctatccctaa	ccctctcctc	720
ggactcgatt	ctacgcgtac	cggtttag				747

<210> 110

<211> 248

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 110

Met	Ser	His	Ser	Lys	Ser	Val	Ile	Lys	Asp	Glu	Met	Phe	Ile	Lys	Ile
1				5				10					15		
His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Thr	Ile	Lys	Gly	Glu

			20					25					30				
Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val		
		35					40					45					
Val	Asn	Gly	Ala	Pro	Leu	Pro	Phe	Gly	Trp	His	Ile	Leu	Ser	Pro	Ala		
	50					55					60						
Phe	Met	Tyr	Gly	Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro		
65					70					75					80		
Asp	Tyr	Phe	Lys	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile		
			85						90					95			
Met	Thr	Phe	Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser		
			100					105					110				
Val	Lys	Gly	Asp	Ser	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn		
		115					120					125					
Phe	Pro	Pro	Asn	Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu		
	130					135					140						
Pro	Ser	Thr	Glu	Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu		
145					150					155					160		
Lys	Gly	His	Asp	Asp	Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Gly	His	Tyr		
				165					170					175			
Thr	Cys	Val	Phe	Lys	Thr	Ile	Tyr	Arg	Ser	Lys	His	Ser	Ile	Asn	Met		
			180					185					190				
Pro	Asp	Phe	His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro		
	195					200						205					
Glu	Asp	Lys	Pro	Val	Lys	Leu	Tyr	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser		
	210					215					220						
Leu	Leu	Pro	Glu	Lys	Asn	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu		
225				230					235						240		
Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly										
				245													

<210> 111

<211> 561

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 111

ttgacaccac	aattacagta	tggaacaag	tcattcgtca	gctacccagc	cgatatacca	60
gactatatca	agctgtcctt	tcctgagggc	tttacctggg	agcgaataat	gacttttgag	120
gacgggggcg	tatgttgcac	cacaagcgac	atcagtgtga	aaggtgactc	tttctactat	180
aagattcact	tcactggcga	gtttcctcct	aatgggtccag	tgatgcagag	gaggatacga	240
ggatgggagc	catccactga	aaacatttat	cctcgcgacg	aatttctgga	gggacatgac	300
gacatgactc	tgcgggttga	aggtggcggc	cattacacat	gtgtctttaa	aactatttac	360
agatccaaga	agaaggtcga	gaatatgcct	gactaccatt	ttatagacca	ccgcattgag	420
attatggagc	atgacgagga	ctacaacccat	gtcaagctgc	gcgagtgtgc	tgtagctcgc	480
tattctctgc	tgcttgagaa	gaacaagggt	aagcctatcc	ctaaccctct	cctcgggactc	540
gattctacgc	gtaccggtta	g				561

<210> 112

<211> 186

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 112
Met Thr Pro Gln Leu Gln Tyr Gly Asn Lys Ser Phe Val Ser Tyr Pro
1 5 10 15
Ala Asp Ile Pro Asp Tyr Ile Lys Leu Ser Phe Pro Glu Gly Phe Thr
20 25 30
Trp Glu Arg Ile Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr
35 40 45
Ser Asp Ile Ser Val Lys Gly Asp Ser Phe Tyr Tyr Lys Ile His Phe
50 55 60
Thr Gly Glu Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg
65 70 75 80
Gly Trp Glu Pro Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu
85 90 95
Glu Gly His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Gly His Tyr
100 105 110
Thr Cys Val Phe Lys Thr Ile Tyr Arg Ser Lys Lys Lys Val Glu Asn
115 120 125
Met Pro Asp Tyr His Phe Ile Asp His Arg Ile Glu Ile Met Glu His
130 135 140
Asp Glu Asp Tyr Asn His Val Lys Leu Arg Glu Cys Ala Val Ala Arg
145 150 155 160
Tyr Ser Leu Leu Pro Glu Lys Asn Lys Gly Lys Pro Ile Pro Asn Pro
165 170 175
Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
180 185

<210> 113

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 113
atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
tctcttgaag tgggtgaatgg cgcgctctg ccgtttgggtt ggcatatatt gtcaccagca 180
tttatgtatg gaaaccgtgt attcaccaaa taccctaaaag agataccaga ctatttcaag 240
cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta 300
tggtgcatca caagcgacat cagtatgaaa agtaacaact gtttcttcta tgacattaag 360
ttcaactggca tgaactttcc tcctaattggg ccagtgtatgc agaggaggat acgaggatgg 420
gagccatcca ctgaacgatt gtatcttcgc gacgggtgtgc tgacgggaga tgtcaacatg 480
gctctgttgc ttaaagatgg ccgccatttg agagttgact ttaacacttc ttacataccc 540
aagaagaagg tcgagaatat gcctgactac cattttatag accaccgcat tgagattctg 600
ggcaacccag aagacaagcc ggtcaagctg tacgagattg ctacagctcg ccatcatggg 660
ctgaagggta agcctatccc taaccctctc ctcggtactcg attctacgcg taccggttag 720

<210> 114

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 114
Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
1 5 10 15
Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
20 25 30
Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
35 40 45
Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Ala Phe Met Tyr Gly
50 55 60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
65 70 75 80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
85 90 95
Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Met Lys Ser Asn
100 105 110
Asn Cys Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro
115 120 125
Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp Glu Pro Ser Thr
130 135 140
Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly Asp Val Asn Met
145 150 155 160
Ala Leu Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp Phe Asn Thr
165 170 175
Ser Tyr Ile Pro Lys Lys Lys Val Glu Asn Met Pro Asp Tyr His Phe
180 185 190
Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val
195 200 205
Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys
210 215 220
Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
225 230 235

<210> 115

<211> 723

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 115

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgттаacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgctcttg	acgttttctt	tcgatgtatt	gacaccagca	180
tttcagtatg	gaaaccgtac	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactggggag	cgaataatga	cttttgagga	cgggggcgta	300
tgttgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tcttctatga	cattaagttc	360
actggcatga	actttcctcc	taatggtcca	gtgatgcaga	ggaggatacg	aggatgggag	420
ccatccactg	aacgattgta	tcttcgcgac	ggtgtgctga	cgggagatgt	caacatggct	480
ctgttgctta	aagatggcgg	ccattacaca	tgtgtcttta	aaactattta	cagatccaag	540
aagaaggctg	agaatatgcc	tgactaccat	tttatagacc	accgcattga	gattatggag	600
catgacgagg	actacaacca	tgtcaagctg	cgcgagattg	ctacagctcg	ccatcatggg	660
ctgaagggta	agcctatccc	taaccctctc	ctcggactcg	attctacgcg	taccggtagc	720
tcg						723

<210> 116

<211> 241

<212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 116
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala Phe Gln Tyr Gly
 50 55 60
 Asn Arg Thr Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85 90 95
 Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro Asn
 115 120 125
 Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp Glu Pro Ser Thr Glu
 130 135 140
 Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly Asp Val Asn Met Ala
 145 150 155 160
 Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys Thr Ile
 165 170 175
 Tyr Arg Ser Lys Lys Lys Val Glu Asn Met Pro Asp Tyr His Phe Ile
 180 185 190
 Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn His Val
 195 200 205
 Lys Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys
 210 215 220
 Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly Ser
 225 230 235 240
 Ser

<210> 117
 <211> 717
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 117
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatgg cgcgcctctg acgttttctt tcgatgtatt gacaccagca 180
 tttatgtatg gaaaccgtgt attcaccaaa taccctaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta 300
 tggtgcatca caagcgacat cagtgtgaaa ggtgactctt tctactataa gattcacttc 360
 actggcgagt ttctctctca tgggtccagt atgcagagaa agacagtaaa atgggagcca 420
 tccactgaac gattgtatct tcgcgacggt gtgctgacgg gacatgacga catgactctg 480

cggggttgaag	gtggcggcca	ttacacatgt	gtctttaaaa	ctatttacag	atccaagaag	540
aaggctcgaga	atatgcctga	ctaccatttt	atagaccacc	gcattgagat	tatggagcat	600
gacgaggact	acaaccatgt	caagctgcgc	gagattgcta	cagctcgcca	tcatgggctg	660
aagggtgaagc	ctatccctaa	ccctctcctc	ggactcgatt	ctacgcgtac	cggttag	717

<210> 118

<211> 238

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 118

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5				10						15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50				55					60					
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65				70					75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
			85					90						95	
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
			100					105					110		
Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly
		115					120					125			
Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Arg
	130					135					140				
Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	His	Asp	Asp	Met	Thr	Leu
145					150					155					160
Arg	Val	Glu	Gly	Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys	Thr	Ile	Tyr
			165					170						175	
Arg	Ser	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe	Ile	Asp
		180						185					190		
His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn	His	Val	Lys
	195						200					205			
Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro
	210					215					220				
Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly		
225				230						235					

<210> 119

<211> 723

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 119

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tggttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	ccgttttctt	tcgatatatt	gacaccagca	180

tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtatgaaa	agtaacaact	gtttcttcta	tgacattaag	360
ttcactggca	tgaactttcc	tcctaattgg	ccagtgatgc	agaggaggat	acgaggatgg	420
gagccatcca	ctgaaaacat	ttatcctcgc	gacgaatttc	tggagggaga	tgtcaacatg	480
gctctgttgc	ttaaagatgg	cggctattac	agagctgaat	ttagaagttc	ttacaaaggc	540
aagaagaagg	tcgagaatat	gcctgactac	cattttatag	accaccgcat	tgagattatg	600
gagcatgacg	aggactacaa	ccatgtcaag	ctgcgcgaga	ttgctacagc	tcgccatcat	660
gggctgaagg	gtaagcctat	ccctaaccct	ctcctcggac	tcgattctac	gcgtaccggt	720
tag						723

<210> 120

<211> 240

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 120

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70					75					80
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
			85					90						95	
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Met	Lys	Ser	Asn
			100					105					110		
Asn	Cys	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn	Phe	Pro	Pro
		115					120					125			
Asn	Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu	Pro	Ser	Thr
	130					135					140				
Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn	Met
145					150					155					160
Ala	Leu	Leu	Leu	Lys	Asp	Gly	Gly	Tyr	Tyr	Arg	Ala	Glu	Phe	Arg	Ser
				165				170						175	
Ser	Tyr	Lys	Gly	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe
		180						185					190		
Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn	His
	195						200					205			
Val	Lys	Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly
	210					215					220				
Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly
225					230					235					240

<210> 121

<211> 639

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 121

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atgatgaccg atctgcatct ggactgcact gttaacggcg acaaatttac gatcaaaggg      60
gaaggaggag gataccctta cgaaggaaca aattttgtaa aacttgtagt gacgaaaggc      120
gggcctctgc cgtttggttg gcatatattg tcaccagcat ttatgtatgg aaaccgtgta      180
ttcaccaaat acccagccga tataccagac tatatcaagc tgcctttcc tgagggttt      240
acctgggagc gaagcattcc ttttcaagac caggcctcat gtaccgtcac aagcgacatc      300
agtgtgaaag gtgactcttt cttctatgac attaagttca ctggcatgaa ctttcctcct      360
aatgggtccag tgatgcagag gaggatacga ggatgggagc catccactga acgattgtat      420
cttcgcgacg gtgtgctgac gggacatgac gacatgactc tgcgggttga aggtggcggc      480
cattacacat gtgtctttaa aactatttac agatccaagc actcgatcaa catgccggat      540
ttccatttta tagaccaccg cattgatatt cggaagttcg acgaaaatta catcaacgtc      600
agcaggacga gattgctaca gctcgccatc atgggctga      639
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<210> 122

<211> 212

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 122

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Met Met Thr Asp Leu His Leu Asp Cys Thr Val Asn Gly Asp Lys Phe
 1           5           10           15
Thr Ile Lys Gly Glu Gly Gly Gly Tyr Pro Tyr Glu Gly Thr Asn Phe
          20           25           30
Val Lys Leu Val Val Thr Lys Gly Gly Pro Leu Pro Phe Gly Trp His
        35           40           45
Ile Leu Ser Pro Ala Phe Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr
       50           55           60
Pro Ala Asp Ile Pro Asp Tyr Ile Lys Leu Ser Phe Pro Glu Gly Phe
      65           70           75           80
Thr Trp Glu Arg Ser Ile Pro Phe Gln Asp Gln Ala Ser Cys Thr Val
          85           90           95
Thr Ser Asp Ile Ser Val Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys
        100          105          110
Phe Thr Gly Met Asn Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg
       115          120          125
Ile Arg Gly Trp Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly
      130          135          140
Val Leu Thr Gly His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Gly
     145          150          155          160
His Tyr Thr Cys Val Phe Lys Thr Ile Tyr Arg Ser Lys His Ser Ile
          165          170          175
Asn Met Pro Asp Phe His Phe Ile Asp His Arg Ile Asp Ile Arg Lys
        180          185          190
Phe Asp Glu Asn Tyr Ile Asn Val Ser Arg Thr Arg Leu Leu Gln Leu
       195          200          205
Ala Ile Met Gly
      210
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<210> 123

<211> 714

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 123

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggagggcgc	tgттаacggc	60
caccacttta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgctctg	acgttttctt	tcgatgtatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaaaaatga	cttatgagga	cgggggcata	300
agtaacgtcc	gaagcgacat	cagtatgaaa	agtaacaact	gtttctacta	taagattcac	360
ttcactggcg	agtttctctc	tcatgggtcca	gtgatgcaga	gaaagacagt	aaaatgggag	420
ccatccactg	aaaacattta	tcctcgcgac	gaatttctgg	agggagatgt	caacatggct	480
ctgttgctta	aagatggcgg	ccattacaca	tgtgtcttta	aaactattta	cagatccaag	540
cactcgatca	acatgccgga	tttccatttt	atagaccacc	gcattgagat	tctgggcaac	600
ccagaagaca	agccggtcaa	gctgtacgag	attgctacag	ctcgccatca	tgggctgaag	660
ggtaagccta	tccctaacc	tctcctcgga	ctcgattcta	cgcgtaccgg	ttag	714

<210> 124

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 124

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Glu	Gly	
1				5					10					15		
Ala	Val	Asn	Gly	His	His	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr	
		20						25					30			
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala	
		35					40						45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly	
		50				55					60					
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys	
65					70					75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu	
				85				90						95		
Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	Asp	Ile	Ser	Met	Lys	Ser	Asn	
			100					105					110			
Asn	Cys	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	
		115					120					125				
Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	
		130				135					140					
Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn	Met	Ala	
145					150					155					160	
Leu	Leu	Leu	Lys	Asp	Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys	Thr	Ile	
				165				170						175		
Tyr	Arg	Ser	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe	Ile	Asp	
			180				185						190			
His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val	Lys	Leu	
		195					200					205				
Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro	Ile	
		210				215					220					
Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly				
225					230					235						

<210> 125
 <211> 714
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 125
 atgaagggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tggttaacggc 60
 gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatgg cgcgcctctg ccgttttggtt ggcatatatt gtcaccagca 180
 tttatgtatg gaaaccgtgt attcaccaaa taccctaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta 300
 tggttgcac caagcgacat cagtgtgaaa ggtgactctt tcttctatga cattaagttc 360
 actggcatga actttcctcc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag 420
 ccatccactg aaaacattta tcctcgcgac gaatttctgg agggagatgt caacatggct 480
 ctggttgctta aagatggcgg ccattacaca tgtgtcttta aaactattta cagatccaag 540
 cactcgatca acatgccgga tttccatttt atagaccacc gcattgagat tctgggcaac 600
 ccagaagaca agccgggtcaa gctgtacgag attgctacag ctcgccatca tgggctgaag 660
 ggtaagccta tccctaacc tctcctcgga ctcgattcta cgcgtaccgg ttag 714

<210> 126
 <211> 237
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 126
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Ala Phe Met Tyr Gly
 50 55 60
 Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85 90 95
 Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro His
 115 120 125
 Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
 130 135 140
 Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val Asn Met Ala
 145 150 155 160
 Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys Thr Ile
 165 170 175
 Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe His Phe Ile Asp
 180 185 190
 His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val Lys Leu

	195		200		205										
Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro	Ile
	210				215						220				
Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly			
225					230					235					

<210> 127

<211> 741

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 127

atgagtcatt	ccaagagtgt	gatcaaggac	gaaatgttca	tcaagattca	tctggaaggc	60
acttttaacg	gccacaaatt	tacgatcaaa	ggggaaggag	gaggataccc	ttacgaagga	120
gtacagttta	tgtctcttga	agtgggtgaat	ggcgcgccctc	tgacgttttc	tttcgatgta	180
ttgacaccag	catttcagta	tggaaccgt	acattcacca	aatacccaaa	agagatacca	240
gactatttca	agcagacctt	tcctgaaggc	tatcactggg	agcgaataat	gacttttgag	300
gacgggggcg	tatgtttgcat	cacaagcgac	atcagtatga	aaagtaacaa	ctgtttcttc	360
tatgacatta	agttcactgg	catgaacttt	cctcctcatg	gtccagtgat	gcagagaaag	420
acagtaaaat	gggagccatc	cactgaagta	atgtatgttg	acgacaagag	tgacgggtgtg	480
ctgaaggggag	atgtcaacat	ggctctgttg	cttaaagatg	gccgccattt	gagagttgac	540
tttaacactt	cttacatacc	caagcactcg	atcaacatgc	cggatttcca	ttttatagac	600
caccgcattg	agattatgga	gcatgacgag	gactacaacc	atgtcaagct	gcgcgagatt	660
gctacagctc	gccatcatgg	gctgaagggt	aagcctatcc	ctaaccctct	cctcgggactc	720
gattctacgc	gtaccggtta	g				741

<210> 128

<211> 246

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 128

Met	Ser	His	Ser	Lys	Ser	Val	Ile	Lys	Asp	Glu	Met	Phe	Ile	Lys	Ile
1				5					10					15	
His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Thr	Ile	Lys	Gly	Glu
		20						25					30		
Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val
		35					40					45			
Val	Asn	Gly	Ala	Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala
	50					55					60				
Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro
65				70					75					80	
Asp	Tyr	Phe	Lys	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile
			85						90				95		
Met	Thr	Phe	Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser
		100						105				110			
Met	Lys	Ser	Asn	Asn	Cys	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met
		115					120					125			
Asn	Phe	Pro	Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp
	130					135					140				
Glu	Pro	Ser	Thr	Glu	Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val

145		150		155		160									
Leu	Lys	Gly	Asp	Val	Asn	Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His
		165		170		175									
Leu	Arg	Val	Asp	Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn
		180		185		190									
Met	Pro	Asp	Phe	His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His
		195		200		205									
Asp	Glu	Asp	Tyr	Asn	His	Val	Lys	Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg
		210		215		220									
His	His	Gly	Leu	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu
		225		230		235									
Asp	Ser	Thr	Arg	Thr	Gly										
				245											

<210> 129
 <211> 723
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 129

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caccacttta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggaac	acagacttta	120
catcttacag	agaaggaagg	caagcctctg	ccgtttgggt	ggcatatatt	gtcaccacaa	180
ttacagtatg	gaaacaagtc	attcgtcagc	taccctaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaaaaatga	cttatgagga	cgggggcata	300
agtaacgtcc	gaagccacat	caggatgaaa	gaggaagagg	agcggcattt	ctactataag	360
attcacttca	ctggcgagtt	tcctcctcat	ggtccagtga	tgcagagaaa	gacagtaaaa	420
tgggagccat	ccactgaacg	attgtatctt	cgcgacgggt	tgctgacggg	acatgacgac	480
atgactctgc	gggttgaagg	tggccgccat	ttgagagttg	actttaacac	ttcttacata	540
cccaagaaga	aggctcgagaa	tatgcctgac	taccatttta	tagaccaccg	cattgagatt	600
ctgggcaacc	cagaagacaa	gccgggtcaag	ctgtacgaga	ttgctacagc	tcgccatcat	660
gggctgaagg	gtaagcctat	ccctaaccct	ctcctcggac	tcgattctac	gcgtaccggt	720
tag						723

<210> 130
 <211> 240
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 130

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Glu	Gly
1				5					10					15	
Ala	Val	Asn	Gly	His	His	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
		35					40					45			
Pro	Leu	Pro	Phe	Gly	Trp	His	Ile	Leu	Ser	Pro	Gln	Leu	Gln	Tyr	Gly
		50				55				60					
Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70				75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu

				85						90					95				
Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	His	Ile	Arg	Met	Lys	Glu	Glu				
			100					105					110						
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro				
		115					120					125							
Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser				
	130					135					140								
Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	His	Asp	Asp				
145					150					155					160				
Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn				
			165						170						175				
Thr	Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His				
		180						185					190						
Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro				
	195						200					205							
Val	Lys	Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly				
	210					215					220								
Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly				
225				230					235						240				

<210> 131

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<221> unsure

<222> 6

<223> N is A, G, C or T

<221> unsure

<222> 32

<223> N is A, G, C or T

<400> 131

atgaangggg	tgaaggaagt	aatgaagatc	antctggaga	tggagggcgc	tgttaacggc	60
caccacttta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	ccgtttgggt	ggcatatatt	gtcaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactggggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tctactataa	gattcacttc	360
actggcgagt	ttcctcctca	tggtccagtg	atgcagagaa	agacagtaaa	atgggagcca	420
tccactgaaa	acatttatcc	tcgcgacgaa	tttctggagg	gagatgtcaa	catggctctg	480
ttgcttaaaag	atggcgggcta	ttacagagct	gaatttagaa	gttcttacia	aggcaagaag	540
aaggtcgaga	atatgcctga	ctaccatttt	atagaccacc	gcattgagat	tatggagcat	600
gacgaggact	acaaccatgt	caagctgcgc	gagattgcta	cagctcgcca	tcatgggctg	660
aagggtaaagc	ctatccctaa	ccctctcctc	ggactcgatt	ctacgcgtac	cggtttag	717

<210> 132

<211> 238

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<221> UNSURE
 <222> 2
 <223> Xaa is Lys or Asp

<221> UNSURE
 <222> 11
 <223> Xaa is Ile, Asp, Ser, or Thr

<400> 132
 Met Xaa Gly Val Lys Glu Val Met Lys Ile Xaa Leu Glu Met Glu Gly
 1 5 10 15
 Ala Val Asn Gly His His Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Ala Phe Met Tyr Gly
 50 55 60
 Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85 90 95
 Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His Gly
 115 120 125
 Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu Asn
 130 135 140
 Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val Asn Met Ala Leu
 145 150 155 160
 Leu Leu Lys Asp Gly Gly Tyr Tyr Arg Ala Glu Phe Arg Ser Ser Tyr
 165 170 175
 Lys Gly Lys Lys Lys Val Glu Asn Met Pro Asp Tyr His Phe Ile Asp
 180 185 190
 His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn His Val Lys
 195 200 205
 Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys Pro
 210 215 220
 Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
 225 230 235

<210> 133
 <211> 732
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 133
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 actttttaacg gccacaaatt tacgatcaaa ggggaaggag gaggataccc ttacgaagga 120
 gtacagttta tgtctcttga agtggtgaat ggcgcgcctc tgccgttttc tttcgatata 180
 ttgacaccag catttcagta tggaaccgt acattcacca aatacccaaa agagatacca 240
 gactatttca agcagacctt tcctgaaggc tatcactggg agcgaataat gacttttgag 300
 gacgggggcg tatgttgcat cacaagcgac atcagtgtga aaggtgactc tttctactat 360
 aagattcact tcactggcga gtttcctcct aatggtccag tgatgcagag gaggatacca 420

ggatgggagc	catccactga	agtaatgtat	gttgacgaca	agagtgacgg	tgtgctgaag	480
ggacatgacg	acatgactct	gcgggttgaa	ggtggccgcc	atttgagagt	tgactttaac	540
acttcttaca	tacccaagca	ctcgatcaac	atgccggatt	tccattttat	agaccaccgc	600
attgagattc	tgggcaaccc	agaagacaag	ccggtcaagc	tgtacgagat	tgctacagct	660
cgccatcatg	ggctgaagg	taagcctatc	cctaaccctc	tcctcggact	cgattctacg	720
cgtaccggtt	ag					732

<210> 134
 <211> 243
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 134

Met	Ser	His	Ser	Lys	Ser	Val	Ile	Lys	Asp	Glu	Met	Phe	Ile	Lys	Ile
1				5					10					15	
His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Thr	Ile	Lys	Gly	Glu
			20					25					30		
Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val
		35					40					45			
Val	Asn	Gly	Ala	Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala
	50					55					60				
Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro
65				70						75				80	
Asp	Tyr	Phe	Lys	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile
			85						90				95		
Met	Thr	Phe	Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser
			100					105					110		
Val	Lys	Gly	Asp	Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe
		115					120					125			
Pro	Pro	Asn	Gly	Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu	Pro
		130				135					140				
Ser	Thr	Glu	Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys
145				150						155				160	
Gly	His	Asp	Asp	Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Arg	His	Leu	Arg
			165						170				175		
Val	Asp	Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met	Pro
			180					185				190			
Asp	Phe	His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu
		195				200					205				
Asp	Lys	Pro	Val	Lys	Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly
	210				215						220				
Leu	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr
225				230					235					240	
Arg	Thr	Gly													

<210> 135
 <211> 717
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

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<400> 135
atgaagggg tgaaggaagt aatgaagatc agtctggaga tggagggcgc tgttaacggc      60
caccactttg agatcgaagg ggagggaaac ggaaaacctt acgcaggagt acagtttatg      120
tctcttgaag tggatgaatgg cgcgcctctg ccgttttctt tcgatatatt gacaccagca      180
tttatgtatg gaaaccgtgt attcaccaaa tacccaaaaag agataccaga ctatttcaag      240
cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta      300
tggtgcatca caagcgacat cagtgtgaaa ggtgactctt tcttctatga cattaagttc      360
actggcatga actttcctcc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag      420
ccatccactg aaaacattta tcctcgcgac gaatttctgg agggagatgt caacatggct      480
ctgttgctta aagatggcgg ccattacaca tgtgtcttta aaactattta cagatccaag      540
cactcgatca acatgccgga tttccatttt atagaccacc gcattgagat tatggagcat      600
gacgaggact acaaccatgt caagctgcgc gagattgcta cagctcgcca tcatgggctg      660
aagggtaagc aaatccctaa ccctctcttc ggactcgatt ctacgggtac cggtttag      717

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<210> 136

<211> 238

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 136

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Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Glu Gly
 1          5          10          15
Ala Val Asn Gly His His Phe Glu Ile Glu Gly Glu Gly Asn Gly Lys
 20          25          30
Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35          40          45
Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50          55          60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65          70          75          80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85          90          95
Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
100          105          110
Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro His
115          120          125
Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
130          135          140
Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val Asn Met Ala
145          150          155          160
Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys Thr Ile
165          170          175
Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe His Phe Ile Asp
180          185          190
His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn His Val Lys
195          200          205
Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys Gln
210          215          220
Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Gly Thr Gly
225          230          235

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<210> 137

<211> 738

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 137

atgagtcatt	ccaagagtgt	gatcaaggac	gaaatgttca	tcaagattca	tctggaaggc	60
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gtacagttta	tgtctcttga	agtgggtgaat	ggcgcgcctc	tgacgttttc	tttcgatgta	180
ttgacaccag	catttatgta	tggaaaccgt	gtattcacca	aatacccaaa	agagatacca	240
gactattttca	agcagacctt	tcctgaaggc	tatcactggg	agcgaataat	gacttttgag	300
gacgggggcg	tatgttgcac	cacaagcgac	atcagtgtga	aaggtgactc	tttcttctat	360
gacattaagt	tactggcat	gaactttcct	cctcatggtc	cagtgatgca	gagaaagaca	420
gtaaaatggg	agccatccac	tgaacgattg	tatcttcgcg	acggtgtgct	gacgggacat	480
gacgacatga	ctctgcgggt	tgaaggtggc	cgccatttga	gagttgactt	taacacttct	540
tacataccca	agcactcgat	caacatgccg	gatttccatt	ttatagacca	ccgcattgag	600
attctgggca	acccagaaga	caagccggtc	aagctgtacg	agtgtgctgt	agctcgctat	660
tctctgctgc	ctgagaagaa	caagggtgaag	cctatcccta	accctctcct	cggactcgat	720
tctacgcgta	ccggttag					738

<210> 138

<211> 245

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 138

Met	Ser	His	Ser	Lys	Ser	Val	Ile	Lys	Asp	Glu	Met	Phe	Ile	Lys	Ile
1				5					10					15	
His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Thr	Ile	Lys	Gly	Glu
			20					25					30		
Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val
		35					40					45			
Val	Asn	Gly	Ala	Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala
	50					55					60				
Phe	Met	Tyr	Gly	Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro
65					70					75					80
Asp	Tyr	Phe	Lys	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile
			85						90					95	
Met	Thr	Phe	Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser
			100					105					110		
Val	Lys	Gly	Asp	Ser	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn
		115					120					125			
Phe	Pro	Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu
	130					135					140				
Pro	Ser	Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	His
145					150					155					160
Asp	Asp	Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Arg	His	Leu	Arg	Val	Asp
			165						170					175	
Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe
		180					185					190			
His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys
		195					200					205			
Pro	Val	Lys	Leu	Tyr	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu	Leu	Pro
	210					215						220			

Glu Lys Asn Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp
 225 230 235 240
 Ser Thr Arg Thr Gly
 245

<210> 139
 <211> 729
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 139
 atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc 60
 actttttaacg gccacaaatt tacgatcaaa ggggaaggag gaggataccc ttacgaagga 120
 gtacagttta tgtctcttga agtgggtgaat ggcgcgcctc tgacgttttc ttctgatgta 180
 ttgacaccag catttatgta tggaaaccgt gtattcacca aatacccaaa agggatacca 240
 gactatttca agcagacctt tcctgaaggc tatcactggg agcgaataat gacttttgag 300
 gacgggggcg tatgttgcat cacaagcgac atcagtgtga aagggtgactc tttcttctat 360
 gacattaagt tcaactggcat gaactttcct cctaattggtc cagtgatgca gaggaggata 420
 ctaggatggg agccatccac tgaacgattg tatcttcgcg acggtgtgct gacgggacat 480
 gacgacatga ctctgcgggt tgaagggtggc ggccattaca catgtgtctt taaaactatt 540
 tacagatcca agaagaaggc cgagaatatg cctgactacc attttataga ccaccgcatt 600
 gagattctgg gcaaccacga agacaagccg gtcaagctgt acgagattgc tacagctcgc 660
 catcatgggc tgaagggtaa gcctatccct aaccctctcc tcggactcga ttctacgcgt 720
 accggttag 729

<210> 140
 <211> 242
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 140
 Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
 1 5 10 15
 His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Thr Ile Lys Gly Glu
 20 25 30
 Gly Gly Gly Tyr Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val
 35 40 45
 Val Asn Gly Ala Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala
 50 55 60
 Phe Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Gly Ile Pro
 65 70 75 80
 Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile
 85 90 95
 Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser
 100 105 110
 Val Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn
 115 120 125
 Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Leu Gly Trp Glu
 130 135 140
 Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly His
 145 150 155 160

Asp Gly Gly Val Cys Cys Ile Thr Ser His Ile Arg Met Lys Glu Glu
 100 105 110
 Glu Glu Arg His Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe
 115 120 125
 Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro
 130 135 140
 Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly His Asp
 145 150 155 160
 Asp Met Thr Leu Arg Val Glu Gly Gly Arg His Leu Arg Val Asp Phe
 165 170 175
 Asn Thr Ser Tyr Ile Pro Lys His Ser Ile Asn Met Pro Asp Phe His
 180 185 190
 Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn
 195 200 205
 His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu Lys
 210 215 220
 Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr
 225 230 235 240
 Gly

<210> 143

<211> 732

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 143

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tctcttgaag	tggtgaatgg	cgcgccctctg	ccgttttctt	tcgatataatt	gacaccacaa	180
ttacagtatg	gaaacaagtc	attcgtcagc	tacccagccg	atataccaga	ctatatcaag	240
ctgtcctttc	ctgagggtt	tacctgggag	cgaagcattc	cttttcaaga	ccaggcctca	300
tgtaccgtca	caagccacat	caggatgaaa	gaggaagagg	agcggcattt	ctactataag	360
attcacttca	ctggcgagtt	tcctcctcat	ggtccagtga	tgagagaaa	gacagtaaaa	420
tgggagccat	ccactgaacg	attgtatctt	cgcgacggtg	tgctgacggg	agatgtcaac	480
atggctctgt	tgcttaaaga	tggccgccat	ttgagagttg	actttaacac	ttcttacata	540
cccaagcact	cgatcaacat	gccggatttc	cattttatag	accaccgcat	tgagattctg	600
ggcaaccag	aagacaagcc	ggtcaagctg	tacgagtgtg	ctgtagctcg	ctattctctg	660
ctgcctgaga	agaacaagg	taagcctatc	cctaaccctc	tcctcggact	cgattctacg	720
cgtaccggtt	ag					732

<210> 144

<211> 243

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 144

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1				5				10					15		
Thr	Val	Asn	Gly	Asp	Lys	Phe	Glu	Ile	Glu	Gly	Glu	Gly	Asn	Gly	Lys
		20						25					30		

Pro	Tyr	Ala	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Gln	Leu	Gln	Tyr	Gly
	50					55					60				
Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Ala	Asp	Ile	Pro	Asp	Tyr	Ile	Lys
65					70					75				80	
Leu	Ser	Phe	Pro	Glu	Gly	Phe	Thr	Trp	Glu	Arg	Ser	Ile	Pro	Phe	Gln
			85						90					95	
Asp	Gln	Ala	Ser	Cys	Thr	Val	Thr	Ser	His	Ile	Arg	Met	Lys	Glu	Glu
			100					105					110		
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro
		115					120					125			
Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser
	130					135					140				
Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	Asp	Val	Asn
145					150					155					160
Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn
				165					170					175	
Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe
			180					185					190		
Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val
	195						200					205			
Lys	Leu	Tyr	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu	Leu	Pro	Glu	Lys
	210					215					220				
Asn	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr
225					230					235					240
Arg	Thr	Gly													

<210> 145

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 145

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tctcttgaag	tggtgaatgg	cgcgcctctg	ccgttttctt	tcgatataatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctattttcaag	240
cagacctttc	ctgaaggcta	tactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tcttctatga	cattaagttc	360
actggcatga	actttcctcc	tcatgggtcca	gtgatgcaga	gaaagacagt	aaaatgggag	420
ccatccactg	aacgattgta	tcttcgcgac	ggtgtgctga	cgggagatgt	caacatggct	480
ctgttgctta	aagatggcgg	ccattacaca	tgtgtcttta	aaactattta	cagatccaag	540
aagaaggtcg	agaatatgcc	tgactaccat	tttatagacc	accgcattga	gattctgggc	600
aaccagaag	acaagccggt	caagctgtac	gagattgcta	cagctcgcca	tcatgggctg	660
aagggtgaagc	ctatccctaa	ccctctcttc	ggactcgatt	ctacgcgtac	cggttag	717

<210> 146

<211> 238

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 146

```
Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1          5          10          15
Thr Val Asn Gly Asp Lys Phe Glu Ile Glu Gly Glu Gly Asn Gly Lys
 20          25          30
Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35          40          45
Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50          55          60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65          70          75          80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85          90          95
Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
100          105          110
Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro His
115          120          125
Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
130          135          140
Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly Asp Val Asn Met Ala
145          150          155          160
Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys Thr Ile
165          170          175
Tyr Arg Ser Lys Lys Lys Val Glu Asn Met Pro Asp Tyr His Phe Ile
180          185          190
Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val Lys
195          200          205
Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys Pro
210          215          220
Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
225          230          235
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<210> 147

<211> 513

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 147

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ttgagatcga aggggagggg aacggaaaac cttacgcagg aacacagact ttacatctta      60
cagagaagga aggcaagcct ctgccgtttg gttggcatat attgtcacca caattacagt      120
atggaaacaa gtcattcgct agctaccagc gcaatatacc agactttttc aagcagaccg      180
tttctggtgg cgggtatacc cactgaagta atgtatgttg acgacaagag tgacgggtgtg      240
ctgaaggggac atgacgacat gactctgcgg gttgaagggt gccgccattt gagagttgac      300
tttaacactt cttacatacc caagcactcg atcaacatgc cggattttcca ttttatagac      360
caccgcattg atattcggaa gttcgacgaa aattacatca acgtcgagca ggacgagtgt      420
gctgtagctc gctattctct gctgcctgag aagaacaagg gtaagcctat ccctaaccct      480
ctcctcggac tcgattctac gcgtaccggt tag                               513
```

<210> 148

<211> 170

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 148

```
Met Arg Ser Lys Gly Arg Glu Thr Glu Asn Leu Thr Gln Glu His Arg
 1          5          10          15
Leu Tyr Ile Leu Gln Arg Arg Lys Ala Ser Leu Cys Arg Leu Val Gly
          20          25          30
Ile Tyr Cys His His Asn Tyr Ser Met Glu Thr Ser His Ser Ser Ala
          35          40          45
Thr Gln Ala Ile Tyr Gln Thr Phe Ser Ser Arg Pro Phe Leu Val Ala
          50          55          60
Gly Ile Pro Thr Glu Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val
65          70          75          80
Leu Lys Gly His Asp Asp Met Thr Leu Arg Val Glu Gly Gly Arg His
          85          90          95
Leu Arg Val Asp Phe Asn Thr Ser Tyr Ile Pro Lys His Ser Ile Asn
          100          105          110
Met Pro Asp Phe His Phe Ile Asp His Arg Ile Asp Ile Arg Lys Phe
          115          120          125
Asp Glu Asn Tyr Ile Asn Val Glu Gln Asp Glu Cys Ala Val Ala Arg
          130          135          140
Tyr Ser Leu Leu Pro Glu Lys Asn Lys Gly Lys Pro Ile Pro Asn Pro
145          150          155          160
Leu Leu Gly Leu Asp Ser Thr Arg Thr Gly
          165          170
```

<210> 149

<211> 690

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 149

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atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc      60
gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg      120
tctcttgaag tggatgaatg cgcgcctctg ccgttttctt tcgatataatt gacaccagca      180
tttatgtatg gaaaccgtgt attcaccaaa tacccaaaag agataccaga ctatttcaag      240
cagacctttc ctgaaggcta ttactgggag cgaaaaatga cttatgagga cgggggcata      300
agtaacgtcc gaagcgacat cagtgtgaaa ggtgactctt tctactataa gattcacttc      360
actggcgagt ttcctcctca tgggtccagt atgcagagaa agacagtaaa atgggagcca      420
tccactgaaa acatttatcc tcgcgacgaa tttctggagg gagatgtcaa catggctctg      480
ttgcttaaag atggccgcca tttgagagtt gactttaaca cttcttacat acccaagaag      540
aaggtcgaga atatgcctga ctaccatttt atagaccacc gcattgagat tctgggcaac      600
ccagaagaca agccggtcaa gctgtacgag attgctacag ctcgccatca tgggctgaag      660
ggtaagccta tccctaacc tctcctcgaa                                690
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<210> 150

<211> 230

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 150
Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
1 5 10 15
Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
20 25 30
Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
35 40 45
Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
50 55 60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
65 70 75 80
Gln Thr Phe Pro Glu Gly Tyr Tyr Trp Glu Arg Lys Met Thr Tyr Glu
85 90 95
Asp Gly Gly Ile Ser Asn Val Arg Ser Asp Ile Ser Val Lys Gly Asp
100 105 110
Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His Gly
115 120 125
Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu Asn
130 135 140
Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val Asn Met Ala Leu
145 150 155 160
Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp Phe Asn Thr Ser Tyr
165 170 175
Ile Pro Lys Lys Lys Val Glu Asn Met Pro Asp Tyr His Phe Ile Asp
180 185 190
His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys Pro Val Lys Leu
195 200 205
Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys Gly Lys Pro Ile
210 215 220
Pro Asn Pro Leu Leu Gly
225 230

<210> 151
<211> 393
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 151
atggaacccg tacattcacc aaatacccag gcaatataacc agactttttc aagcagaccg 60
tttctggtgg cgggtataacc cactgaagta atgtatggtg acgacaagag tgacgggtgtg 120
ctgaagggag atgtcaacat ggctctggtg cttaaagatg gccgccattt gagagttgac 180
tttaacactt cttacataacc caagcactcg atcaacatgc cggatttcca ttttatagac 240
caccgcattg agattatgga gcatgacgag gactacaacc atgtcaagct gcgcgagtgt 300
gctgtagctc gctattctct gctgctgag aagaacaagg gtaagcctat ccctaaccct 360
ctcctcggac tcgattctac gcgtaccggt tag 393

<210> 152
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 152
Met Glu Thr Val His Ser Pro Asn Thr Gln Ala Ile Tyr Gln Thr Phe
1 5 10 15
Ser Ser Arg Pro Phe Leu Val Ala Gly Ile Pro Thr Glu Val Met Tyr
20 25 30
Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val Asn Met Ala
35 40 45
Leu Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp Phe Asn Thr Ser
50 55 60
Tyr Ile Pro Lys His Ser Ile Asn Met Pro Asp Phe His Phe Ile Asp
65 70 75 80
His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn His Val Lys
85 90 95
Leu Arg Glu Cys Ala Val Ala Arg Tyr Ser Leu Leu Pro Glu Lys Asn
100 105 110
Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg
115 120 125
Thr Gly
130

<210> 153
<211> 750
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 153
atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc 60
acttttaacg gccacaaatt tacgatcaaa ggggaaggag gaggataccc ttacgaagga 120
gtacagttta tgtctcttga agtgggtgaat ggcgcgcctc tgacgttttc tttcgatgta 180
ttgacaccag catttatgta tggaaaccgt gtattcacca aatacccaaa agagatacca 240
gactatttca agcagacctt tcctgaaggc tatcactggg agcgaataat gacttttgag 300
gacgggggag tatgttgcat cacaagccac atcaggatga aagaggaaga ggagcggcat 360
ttcttctatg acattaagtt cactggcatg aactttcctc ctcattggtcc agtgatgcag 420
agaaagacag taaaatggga gccatccact gaagtaatgt atgttgacga caagagtgcg 480
ggtgtgctga agggagatgt caacatggct ctgttgctta aagatggcgg ctattacaga 540
gctgaattta gaagttctta caaaggcaag aagaaggctg agaatatgcc tgactaccat 600
tttatagacc accgcattga gattatggag catgacgagg actacaacca tgtcaagctg 660
cgcgagattg ctacagctcg ccatcatggg ctgaagggtg agcctatccc taaccctctc 720
ctcggactcg attctacgcg taccgggttag 750

<210> 154
<211> 249
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetically generated

<400> 154
Met Ser His Ser Lys Ser Val Ile Lys Asp Glu Met Phe Ile Lys Ile
1 5 10 15
His Leu Glu Gly Thr Phe Asn Gly His Lys Phe Thr Ile Lys Gly Glu
20 25 30

Gly Gly Gly Tyr Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val
 35 40 45
 Val Asn Gly Ala Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Ala
 50 55 60
 Phe Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro
 65 70 75 80
 Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile
 85 90 95
 Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser His Ile Arg
 100 105 110
 Met Lys Glu Glu Glu Glu Arg His Phe Phe Tyr Asp Ile Lys Phe Thr
 115 120 125
 Gly Met Asn Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val
 130 135 140
 Lys Trp Glu Pro Ser Thr Glu Val Met Tyr Val Asp Asp Lys Ser Asp
 145 150 155 160
 Gly Val Leu Lys Gly Asp Val Asn Met Ala Leu Leu Leu Lys Asp Gly
 165 170 175
 Gly Tyr Tyr Arg Ala Glu Phe Arg Ser Ser Tyr Lys Gly Lys Lys Lys
 180 185 190
 Val Glu Asn Met Pro Asp Tyr His Phe Ile Asp His Arg Ile Glu Ile
 195 200 205
 Met Glu His Asp Glu Asp Tyr Asn His Val Lys Leu Arg Glu Ile Ala
 210 215 220
 Thr Ala Arg His His Gly Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu
 225 230 235 240
 Leu Gly Leu Asp Ser Thr Arg Thr Gly
 245

<210> 155

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 155

atgaagggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	ccgttttctt	tcgatataatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtatgaaa	agtaacaact	gtttcttcta	tgacattaag	360
ttcactggca	tgaactttcc	tcctcatggg	ccagtgtatg	agagaaagac	agtaaaatgg	420
gagccatcca	ctgaacgatt	gtatcttcgc	gacggtgtgc	tgacgggaga	tgtcaacatg	480
gctctgttgc	ttaaagatgg	ccgccatttg	agagttgact	ttaacacttc	ttacataccc	540
aagaagaagg	tcgagaatat	gcctgactac	cattttatag	accaccgcat	tgagattctg	600
ggcaaccag	aagacaagcc	ggtcaagctg	tacgagattg	ctacagctcg	ccatcatggg	660
ctgaagggta	agcctatccc	taaccctctc	ctcggactcg	attctacgcg	taccggttag	720

<210> 156

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 156

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
	35						40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50					55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70				75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
			85					90					95		
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Met	Lys	Ser	Asn
			100					105					110		
Asn	Cys	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr	Gly	Met	Asn	Phe	Pro	Pro
	115						120					125			
His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr
	130					135						140			
Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	Asp	Val	Asn	Met
145					150				155					160	
Ala	Leu	Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn	Thr
			165					170					175		
Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe
			180					185					190		
Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val
	195						200					205			
Lys	Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys
	210					215					220				
Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	
225					230					235					

<210> 157

<211> 738

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 157

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgctctg	ccgttttctt	tcgatatatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaaaaatga	cttatgagga	cgggggcata	300
agtaacgtcc	gaagcgacat	cagtgtgaaa	ggtgactctt	tcttctatga	cattaagttc	360
actggcatga	actttcctcc	taatggtcca	gtgatgcaga	ggaggatacg	aggatgggag	420
ccatccactg	aagtaatgta	tgttgacgac	aagagtgcag	gtgtgctgaa	gggagatgtc	480
aacatggctc	tgttgcttaa	agatggccgc	catttgagag	ttgactttta	cacttcttac	540
ataccaaga	agaaggtcga	gaatatgcct	gactaccatt	ttatagacca	ccgcattgag	600
attctgggca	accagaaga	caagccggtc	aagctgtacg	agtgtgctgt	agctcgctat	660
tctctgctgc	ctgagaagaa	caagggttaag	cctatcccta	accctctcct	cggactcgat	720
tctacgcgta	ccggttag					738

<210> 158
 <211> 245
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 158
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50 55 60
 Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Lys Met Thr Tyr Glu
 85 90 95
 Asp Gly Gly Ile Ser Asn Val Arg Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro Asn
 115 120 125
 Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp Glu Pro Ser Thr Glu
 130 135 140
 Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val
 145 150 155 160
 Asn Met Ala Leu Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp Phe
 165 170 175
 Asn Thr Ser Tyr Ile Pro Lys Lys Lys Val Glu Asn Met Pro Asp Tyr
 180 185 190
 His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys
 195 200 205
 Pro Val Lys Leu Tyr Glu Cys Ala Val Ala Arg Tyr Ser Leu Leu Pro
 210 215 220
 Glu Lys Asn Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp
 225 230 235 240
 Ser Thr Arg Thr Gly
 245

<210> 159
 <211> 588
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 159
 gtgacgaaag gcgggcctct gacgttttct ttcgatgtat tgacaccagc atttcagtat 60
 ggaaaccgta cattcaccaa atacccaaaa gagataccag actatttcaa gcagaccttt 120
 cctgaaggct atcactggga gcgaagcatt ccttttcaag accaggcctc atgtaccgtc 180
 acaagcgaca tcagtgtgaa aggtgactct ttcttctatg acattaagtt cactggcatg 240
 aactttcctc ctcatggtcc agtgatgcag agaaagacag taaaatggga gccatccact 300
 gaacgattgt atcttcgcga cgggtgtgctg acgggagata tccacaagac tctgaaactt 360

agcgggtggcg gccattacac atgtgtcttt aaaactatatt acagatccaa gcactcgatc	420
aacatgccgg atttccattt tatagaccac cgcattgaga ttctgggcaa cccagaagac	480
aagccggtca agctgtacga gattgctaca gctcgccatc atgggctgaa gggtaagcct	540
atccctaacc ctctcctcgg actcgattct acgcgtaccg gttactcg	588

<210> 160

<211> 196

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 160

Met Thr Lys Gly Gly Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro	
1 5 10 15	
Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Lys Glu Ile	
20 25 30	
Pro Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg	
35 40 45	
Ser Ile Pro Phe Gln Asp Gln Ala Ser Cys Thr Val Thr Ser Asp Ile	
50 55 60	
Ser Val Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met	
65 70 75 80	
Asn Phe Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp	
85 90 95	
Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly	
100 105 110	
Asp Ile His Lys Thr Leu Lys Leu Ser Gly Gly Gly His Tyr Thr Cys	
115 120 125	
Val Phe Lys Thr Ile Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp	
130 135 140	
Phe His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp	
145 150 155 160	
Lys Pro Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu	
165 170 175	
Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg	
180 185 190	
Thr Gly Tyr Ser	
195	

<210> 161

<211> 738

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 161

atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc	60
gacaaatttg agatcgaagg ggagggaaac ggaaaacctt acgcaggaac acagacttta	120
catcttacag agaaggaagg caagcctctg ccgttttctt tcgatataatt gacaccagca	180
tttatgtatg gaaaccgtgt attcaccaaa tacccaaaag agataccaga ctatttcaag	240
cagacctttc ctgaaggcta tcaactgggag cgaaaaatga cttatgagga cgggggcata	300
agtaacgtcc gaagccacat caggatgaaa gaggaagagg agcggcattt ctactataag	360
attcacttca ctggcgagtt tcctcctcat ggtccagtga tgcagagaaa gacagtaaaa	420

tgggagccat	ccactgaaaa	catttatcct	cgcgacgaat	ttctggaggg	acatgacgac	480
atgactctgc	gggttgaagg	tggcggctat	tacagagctg	aatttagaag	ttcttacaaa	540
ggcaagaaga	aggtcgagaa	tatgcctgac	taccatttta	tagaccaccg	cattgagatt	600
atggagcatg	acgaggacta	caaccatgtc	aagctgcgcg	agtgtgctgt	agctcgctat	660
tctctgctgc	ctgagaagaa	caagggtaag	cctatcccta	accctctcct	cggactcgat	720
tctacgcgta	ccggttag					738

<210> 162
 <211> 245
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 162

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Glu	Ile	Glu	Gly	Glu	Gly	Asn	Gly	Lys
		20						25					30		
Pro	Tyr	Ala	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
		35					40					45			
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50				55					60					
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65				70					75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu
			85					90					95		
Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	His	Ile	Arg	Met	Lys	Glu	Glu
			100					105					110		
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro
		115					120					125			
Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser
	130					135					140				
Thr	Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	His	Asp	Asp
145				150					155					160	
Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Gly	Tyr	Tyr	Arg	Ala	Glu	Phe	Arg
			165					170						175	
Ser	Ser	Tyr	Lys	Gly	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His
		180					185						190		
Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn
	195					200					205				
His	Val	Lys	Leu	Arg	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu	Leu	Pro
	210				215						220				
Glu	Lys	Asn	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp
225				230					235					240	
Ser	Thr	Arg	Thr	Gly											
			245												

<210> 163
 <211> 603
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

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<400> 163
gtgacgaaag gcgggcctct gccgttttct ttcgatatat tgacaccaca attacagtat      60
ggaacaagt cattcgctcag ctacccaaaa gagataccag actatttcaa gcagaccttt      120
cctgaaggct atcactggga gcgaataatg acttttgagg acgggggcggt atgttgcatc      180
acaagcgaca tcagtatgaa aagtaacaac tgtttcttct atgacattaa gttcactggc      240
atgaactttc ctctaatggg tccagtgatg cagaggagga tacgaggatg ggagccatcc      300
actgaacgat tgtatcttcg cgacggtgtg ctgacgggag atgtcaacat ggctctgttg      360
cttaaagatg gcggctatta cagagctgaa tttagaagtt cttacaaagg caagaagaac      420
ctcacgcttc cggattgctt ctattatgta gacaccaaac ttgagattct gggcaaccca      480
gaagacaagc cggtaagct gtacgagtgt gctgtagctc gctattctct gctgcctgag      540
aagaacaagg gtaagcctat ccctaaccct ctctcggac tcgattctac gcgtaccggt      600
tag                                                                    603

```

<210> 164

<211> 200

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 164

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Met Thr Lys Gly Gly Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro
1      5      10      15
Gln Leu Gln Tyr Gly Asn Lys Ser Phe Val Ser Tyr Pro Lys Glu Ile
20     25     30
Pro Asp Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg
35     40     45
Ile Met Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile
50     55     60
Ser Met Lys Ser Asn Asn Cys Phe Phe Tyr Asp Ile Lys Phe Thr Gly
65     70     75     80
Met Asn Phe Pro Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly
85     90     95
Trp Glu Pro Ser Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr
100    105    110
Gly Asp Val Asn Met Ala Leu Leu Leu Lys Asp Gly Gly Tyr Tyr Arg
115    120    125
Ala Glu Phe Arg Ser Ser Tyr Lys Gly Lys Lys Asn Leu Thr Leu Pro
130    135    140
Asp Cys Phe Tyr Tyr Val Asp Thr Lys Leu Glu Ile Leu Gly Asn Pro
145    150    155    160
Glu Asp Lys Pro Val Lys Leu Tyr Glu Cys Ala Val Ala Arg Tyr Ser
165    170    175
Leu Leu Pro Glu Lys Asn Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu
180    185    190
Gly Leu Asp Ser Thr Arg Thr Gly
195    200

```

<210> 165

<211> 663

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

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<400> 165
atgaagggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc      60
gacaaatttg agatcgaagg ggagggaaac ggaaaacctt acgcaggaac acagacttta      120
catcttacag agaaggaagg caagcctctg ccgtttggtt ggcatatatt gtcaccagca      180
tttatgtatg gaaaccgtgt attcaccaaa taccctaaag agataccaga ctatttcaag      240
cagacctttc ctgaaggcta tcaactggag cgaagcattc cttttcaaga ccaggcctca      300
tgtaccgtca caagcgacat cagtatgaaa agtaacaact gtttcttcta tgacattaag      360
ttcactggca tgaactttcc tcctcatggt ccagtgatgc agagaaagac agtaaaatgg      420
gagccatcca ctgaaaacat ttatcctcgc gacgaatttc tggagggaga tgtcaacatg      480
gctctgttgc ttaaagatgg cggccattac acatgtgtct ttaaaactat ttacagatcc      540
aagcactcga tcaacatgcc ggatttccat tttatagacc accgcattga tattcggaag      600
ttcgacgaaa attacatcaa cgcgagcagg acgagattgc tacagctcgc catcatgggc      660
tga
663

```

```

<210> 166
<211> 220
<212> PRT
<213> Artificial Sequence

```

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<220>
<223> Synthetically generated

```

```

<400> 166
Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
1      5      10      15
Thr Val Asn Gly Asp Lys Phe Glu Ile Glu Gly Glu Gly Asn Gly Lys
20      25      30
Pro Tyr Ala Gly Thr Gln Thr Leu His Leu Thr Glu Lys Glu Gly Lys
35      40      45
Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Ala Phe Met Tyr Gly
50      55      60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
65      70      75      80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ser Ile Pro Phe Gln
85      90      95
Asp Gln Ala Ser Cys Thr Val Thr Ser Asp Ile Ser Met Lys Ser Asn
100     105     110
Asn Cys Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro
115     120     125
His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr
130     135     140
Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val Asn Met
145     150     155     160
Ala Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe Lys Thr
165     170     175
Ile Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe His Phe Ile
180     185     190
Asp His Arg Ile Asp Ile Arg Lys Phe Asp Glu Asn Tyr Ile Asn Ala
195     200     205
Ser Arg Thr Arg Leu Leu Gln Leu Ala Ile Met Gly
210     215     220

```

```

<210> 167
<211> 726
<212> DNA
<213> Artificial Sequence

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<220>

<223> Synthetically generated

<400> 167

atgaagggg	tgaaggaagt	aatgaagatc	agtctggaga	tggagggcgc	tggttaacggc	60
caccacttta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	ccgttttctt	tcgatatatt	gacaccagca	180
tttcagtatg	gaaaccgtac	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggttgcata	caagccacat	caggatgaaa	gaggaagagg	agcggcattt	ctactataag	360
attcacttca	ctggcgagtt	tcctcctcat	ggtccagtga	tgcagagaaa	gacagtaaaa	420
tgggagccat	ccactgaaaa	catttatcct	cgcgacgaat	ttctggaggg	agatgtcaac	480
atggctctgt	tgcttaaaga	tggcggccat	tacacatgtg	tctttaaaac	tatttacaga	540
tccaagaaga	aggtcgagaa	tatgcctgac	taccatttta	tagaccaccg	cattgagatt	600
atggagcatg	acgaggacta	caaccatgtc	aagctgcgcg	agattgctac	agctcgccat	660
catgggctga	agggtaagcc	tatccctaac	cctctcctcg	gactcgattc	tacgcgtacc	720
ggttag						726

<210> 168

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 168

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Glu	Gly	
1				5					10					15		
Ala	Val	Asn	Gly	His	His	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr	
		20						25					30			
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala	
	35						40					45				
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Gln	Tyr	Gly	
	50					55					60					
Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys	
65					70				75					80		
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu	
			85					90					95			
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	His	Ile	Arg	Met	Lys	Glu	Glu	
			100					105					110			
Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	
		115					120					125				
Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	
	130					135					140					
Thr	Glu	Asn	Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn	
145					150					155					160	
Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys	
			165						170						175	
Thr	Ile	Tyr	Arg	Ser	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	
			180					185					190			
Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn	
		195					200					205				
His	Val	Lys	Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	
	210					215					220					
Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	
225					230					235					240	

Gly

<210> 169
 <211> 624
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 169
 atggaggcg ctgttaacgg ccaccacttt gagatcgaag gggagggaaa cggaaaacct 60
 tacgcaggag tacagtttat gtctcttgaa gtggtgaatg gcgcgcctct gccgttttct 120
 ttcgatatat tgacaccagc atttatgtat ggaaaccgtg tattcaccaa atacccaaaa 180
 gagataccag actatttcaa gcagaccttt cctgaaggct atcactggga gcgaataatg 240
 acttttgagg acgggggctg atgttgcac acaagcgaca tcagtgtgaa aggtgactct 300
 ttcttctatg acattaagtt cactggcatg aactttctc ctcattggtcc agtgatgcag 360
 agaaagacag taaaatggga gccatccact gaaaacattt atcctcgcga cgaatttctg 420
 gagggagatg tcaacatggc tctgttgctt aaagatggcg gccattacac atgtgtcttt 480
 aaaactatgt acagatccaa gcactcgatc aacatgccgg atttccattt tatagaccac 540
 cgcattgaga ttatggagca tgacgaggac tacaaccatg tcaagctgcg cgagattgct 600
 acagctcgcc atcatgggt gaag 624

<210> 170
 <211> 208
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 170
 Met Glu Gly Ala Val Asn Gly His His Phe Glu Ile Glu Gly Glu Gly
 1 5 10 15
 Asn Gly Lys Pro Tyr Ala Gly Val Gln Phe Met Ser Leu Glu Val Val
 20 25 30
 Asn Gly Ala Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe
 35 40 45
 Met Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp
 50 55 60
 Tyr Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met
 65 70 75 80
 Thr Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val
 85 90 95
 Lys Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe
 100 105 110
 Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro
 115 120 125
 Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val
 130 135 140
 Asn Met Ala Leu Leu Leu Lys Asp Gly Gly His Tyr Thr Cys Val Phe
 145 150 155 160
 Lys Thr Ile Tyr Arg Ser Lys His Ser Ile Asn Met Pro Asp Phe His
 165 170 175
 Phe Ile Asp His Arg Ile Glu Ile Met Glu His Asp Glu Asp Tyr Asn
 180 185 190

His Val Lys Leu Arg Glu Ile Ala Thr Ala Arg His His Gly Leu Lys
195 200 205

<210> 171

<211> 702

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 171

atgatgaccg	atctgcatct	ggactgcact	gttaacggcg	acaaattttac	gatcaaaggg	60
gaaggaggag	gataccctta	cgaaggaaca	aattttgtaa	aacttgtagt	gacgaaaggc	120
gggcctctgc	cgtttggttg	gcataatattg	tcaccacaat	tacagtatgg	aaacaagtca	180
ttcgtcagct	acccagccga	tataccagac	tatatcaagc	tgctctttcc	tgagggcttt	240
acctgggagc	gaaaaatgac	ttatgaggac	gggggcataa	gtaacgtccg	aagccacatc	300
aggatgaaag	aggaagagga	gcggcatttc	tactataaga	ttcacttcac	tggcgagttt	360
cctcctcatg	gtccagtgat	gcagagaaaag	acagtaaaat	gggagccatc	cactgaaaac	420
atttatcctc	gcgacgaatt	tctggaggga	catgacgaca	tgactctgcg	ggttgaaggt	480
ggcgggccatt	acacatgtgt	ctttaaaact	atttacagat	ccaagaagaa	cctcacgctt	540
ccggattgct	tctattatgt	agacaccaaa	cttgagattc	tgggcaaccc	agaagacaag	600
ccggtcaagc	tgtacgagat	tgctacagct	cgccatcatg	ggctgaaggg	taagcctatc	660
cctaaccctc	tctcggact	cgattctacg	cgtaccggtt	ag		702

<210> 172

<211> 233

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 172

Met	Met	Thr	Asp	Leu	His	Leu	Asp	Cys	Thr	Val	Asn	Gly	Asp	Lys	Phe
1				5					10					15	
Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Gly	Thr	Asn	Phe
			20					25					30		
Val	Lys	Leu	Val	Val	Thr	Lys	Gly	Gly	Pro	Leu	Pro	Phe	Gly	Trp	His
		35					40					45			
Ile	Leu	Ser	Pro	Gln	Leu	Gln	Tyr	Gly	Asn	Lys	Ser	Phe	Val	Ser	Tyr
	50					55					60				
Pro	Ala	Asp	Ile	Pro	Asp	Tyr	Ile	Lys	Leu	Ser	Phe	Pro	Glu	Gly	Phe
65					70				75						80
Thr	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu	Asp	Gly	Gly	Ile	Ser	Asn	Val
				85				90						95	
Arg	Ser	His	Ile	Arg	Met	Lys	Glu	Glu	Glu	Glu	Arg	His	Phe	Tyr	Tyr
			100					105					110		
Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly	Pro	Val	Met	Gln
		115					120					125			
Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Asn	Ile	Tyr	Pro	Arg
		130				135					140				
Asp	Glu	Phe	Leu	Glu	Gly	His	Asp	Asp	Met	Thr	Leu	Arg	Val	Glu	Gly
145					150				155						160
Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys	Thr	Ile	Tyr	Arg	Ser	Lys	Lys
				165				170						175	
Asn	Leu	Thr	Leu	Pro	Asp	Cys	Phe	Tyr	Tyr	Val	Asp	Thr	Lys	Leu	Glu

	180		185		190										
Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val	Lys	Leu	Tyr	Glu	Ile	Ala
	195		200		205										
Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu
	210		215		220										
Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly							
225			230												

<210> 173

<211> 729

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 173

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	ccgttttctt	tcgatatatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactggggag	cgaaaaatga	cttatgagga	cgggggcata	300
agtaacgtcc	gaagcgacat	cagtgtgaaa	ggtgactctt	tctactataa	gattcacttc	360
actggcgagt	ttctctctaa	tggtccagtg	atgcagagga	ggatacgagg	atgggagcca	420
tccactgaaa	acatttatcc	tcgcgacgaa	tttctggagg	gacatgacga	catgactctg	480
cgggttgaag	gtggccgcca	tttgagagtt	gactttaaca	cttcttacat	acccaagaag	540
aaggctcgaga	atatgcctga	ctaccatttt	atagaccacc	gcattgagat	tatggagcat	600
gacgaggact	acaaccatgt	caagctgcgc	gagtgtgctg	tagctcgcta	ttctctgctg	660
cctgagaaga	acaagggtaa	gcctatccct	aaccctctcc	tcggactcga	ttctacgcgt	720
accggttag						729

<210> 174

<211> 242

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 174

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1			5					10					15		
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20					25					30			
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
	35					40					45				
Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
	50				55					60					
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65				70				75						80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu
		85				90							95		
Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
	100					105					110				
Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	Asn	Gly
	115				120						125				
Pro	Val	Met	Gln	Arg	Arg	Ile	Arg	Gly	Trp	Glu	Pro	Ser	Thr	Glu	Asn

130		135		140
Ile Tyr Pro Arg Asp Glu	Phe Leu Glu Gly His	Asp Asp Met Thr Leu		
145		150		155
Arg Val Glu Gly Gly Arg	His Leu Arg Val Asp	Phe Asn Thr Ser Tyr		160
		165		170
Ile Pro Lys Lys Lys Val	Glu Asn Met Pro Asp	Tyr His Phe Ile Asp		175
		180		185
His Arg Ile Glu Ile Met	Glu His Asp Glu Asp	Tyr Asn His Val Lys		190
		195		200
Leu Arg Glu Cys Ala Val	Ala Arg Tyr Ser Leu	Leu Pro Glu Lys Asn		205
		210		215
Lys Gly Lys Pro Ile Pro	Asn Pro Leu Leu Gly	Leu Asp Ser Thr Arg		220
225		230		235
Thr Gly				240

<210> 175

<211> 663

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 175

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggaactgcac	tggttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggaac	acagacttta	120
catcttacag	agaaggaagg	caagcctctg	ccgtttgggt	ggcatatatt	gtcaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tcactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tctactataa	gattcacttc	360
actggcgagt	ttcctcctca	tggtccagtg	atgcagagaa	agacagtaaa	atgggagcca	420
tccactgaaa	acatttatcc	tcgcgacgaa	tttctggagg	gagatgtcaa	catggctctg	480
ttgcttaaag	atggcggcca	ttacacatgt	gtctttaaaa	ctatttacag	atccaagaag	540
aaggctcgaga	atatgcctga	ctaccatttt	atagaccacc	gcattgagat	tatggagcat	600
gacgaggact	acaacatgt	caagctgcgc	gagattgcta	cagctcgcca	tcatgggctg	660
tag						663

<210> 176

<211> 220

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 176

Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys	
1 5 10 15	
Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr	
20 25 30	
Pro Tyr Glu Gly Thr Gln Thr Leu His Leu Thr Glu Lys Glu Gly Lys	
35 40 45	
Pro Leu Pro Phe Gly Trp His Ile Leu Ser Pro Ala Phe Met Tyr Gly	
50 55 60	
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys	
65 70 75 80	

Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
				85					90					95	
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
			100					105					110		
Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly
		115					120					125			
Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Asn
	130					135					140				
Ile	Tyr	Pro	Arg	Asp	Glu	Phe	Leu	Glu	Gly	Asp	Val	Asn	Met	Ala	Leu
145					150					155					160
Leu	Leu	Lys	Asp	Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys	Thr	Ile	Tyr
			165						170					175	
Arg	Ser	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe	Ile	Asp
			180					185					190		
His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn	His	Val	Lys
	195					200						205			
Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu				
	210					215					220				

<210> 177

<211> 726

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 177

atgaaggggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	ccgtttgggt	ggcatatatt	gtcaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactggggag	cgaaaaatga	cttatgagga	cgggggcata	300
agtaacgtcc	gaagcgacat	cagtgtgaaa	ggtgactctt	tctactataa	gattcacttc	360
actggcgagt	ttcctcctca	tggtccagtg	atgcagagaa	agacagtaaa	atgggagcca	420
tccactgaag	taatgtatgt	tgacgacaag	agtgcgggtg	tgctgaaggg	agatgtcaac	480
atggctctgt	tgcttaaaga	tggcggccat	tacacatgtg	tctttaaaac	tatttacaga	540
tccaagaaga	aggtcgagaa	tatgcctgac	taccatttta	tagaccaccg	cattgagatt	600
atggagcatg	acgaggacta	caaccatgtc	aagctgcgcg	agattgctac	agctcgccat	660
catgggctga	agggtaaagg	tatccctaac	cctctcctcg	gactcgattc	tacgcgtacc	720
ggttag						726

<210> 178

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 178

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5				10						15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20					25						30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
	35						40					45			

Pro	Leu	Pro	Phe	Gly	Trp	His	Ile	Leu	Ser	Pro	Ala	Phe	Met	Tyr	Gly
50						55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
65					70					75					80
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Lys	Met	Thr	Tyr	Glu
				85					90					95	
Asp	Gly	Gly	Ile	Ser	Asn	Val	Arg	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
			100					105					110		
Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly
			115				120						125		
Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Val
						135					140				
Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys	Gly	Asp	Val	Asn
145					150					155					160
Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys
				165					170					175	
Thr	Ile	Tyr	Arg	Ser	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His
			180					185					190		
Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp	Tyr	Asn
			195				200					205			
His	Val	Lys	Leu	Arg	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys
			210			215					220				
Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr
225					230					235					240
Gly															

<210> 179

<211> 825

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 179

atgatggcga	tttccgctct	aaagaacgtc	atcatcatcg	taatcatata	ctcctgcagc	60
actagtgtcg	attcgctcga	ctcttactct	ggatcctcct	tgcgcaatgg	gattgcggaa	120
gaaatgatga	ccgatctgca	tctggactgc	actgttaacg	gcgacaaatt	tacgatcaaa	180
ggggaaggag	gaggataccc	ttacgaagga	gtacagttta	tgtctcttga	agtgggtgaat	240
ggcgcgcctc	tgccgttttc	tttcgatata	ttgacaccag	catttatgta	tggaaccgt	300
gtattcacca	aatacccaaa	agagatacca	gactatttca	agcagacctt	tcctgaaggc	360
tatcactggg	agcgaataat	gacttttgag	gacgggggcg	tatgttgcac	cacaagcgac	420
atcagtgtga	aaggtgactc	tttcttctat	gacattaagt	tcactggcat	gaactttcct	480
cctaattggtc	cagtgtatga	gaggaggata	cgaggatggg	agccatccac	tgaacgattg	540
tatcttcgcg	acggtgtgct	gacgggacat	gacgacatga	ctctgcgggt	tgaaggtggc	600
cgccatttga	gagttgactt	taacacttct	tacataccca	agaagaacct	cacgcttccg	660
gattgcttct	attatgtaga	caccaaactt	gatattcgga	agttcgacga	aaattacatc	720
aacgtcgagc	aggacgagat	tgctacagct	cgccatcatg	ggctgaaggg	taagcctatc	780
cctaaccctc	tcctcggact	cgattctacg	cgtaccggta	gctcgc		825

<210> 180

<211> 275

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 180

```
Met Met Ala Ile Ser Ala Leu Lys Asn Val Ile Ile Ile Val Ile Ile
 1          5          10          15
Tyr Ser Cys Ser Thr Ser Ala Asp Ser Ser Asn Ser Tyr Ser Gly Ser
 20          25          30
Ser Phe Ala Asn Gly Ile Ala Glu Met Met Thr Asp Leu His Leu
 35          40          45
Asp Cys Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly
 50          55          60
Gly Tyr Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn
 65          70          75          80
Gly Ala Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met
 85          90          95
Tyr Gly Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr
100          105          110
Phe Lys Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr
115          120          125
Phe Glu Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys
130          135          140
Gly Asp Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro
145          150          155          160
Pro Asn Gly Pro Val Met Gln Arg Arg Ile Arg Gly Trp Glu Pro Ser
165          170          175
Thr Glu Arg Leu Tyr Leu Arg Asp Gly Val Leu Thr Gly His Asp Asp
180          185          190
Met Thr Leu Arg Val Glu Gly Gly Arg His Leu Arg Val Asp Phe Asn
195          200          205
Thr Ser Tyr Ile Pro Lys Lys Asn Leu Thr Leu Pro Asp Cys Phe Tyr
210          215          220
Tyr Val Asp Thr Lys Leu Asp Ile Arg Lys Phe Asp Glu Asn Tyr Ile
225          230          235          240
Asn Val Glu Gln Asp Glu Ile Ala Thr Ala Arg His His Gly Leu Lys
245          250          255
Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr
260          265          270
Gly Ser Ser
275
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<210> 181

<211> 750

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 181

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atgagtcatt ccaagagtgt gatcaaggac gaaatgttca tcaagattca tctggaaggc      60
acttttaacg gccacaaatt tacgatcaaa ggggaaggag gaggataccc ttacgaaggga      120
gtacagttta tgtctcttga agtggtgaat ggcgcgcctc tgccgttttc tttcgatata      180
ttgacaccag catttatgta tggaaccgtt gtattcacca aatacccaaa agagatacca      240
gactatttca agcagacctt tcctgaaggc tatcactggg agcgaataat gacttttgag      300
gacggggggc tatgttgcac cacaagccac atcaggatga aagaggaaga ggagcggcat      360
ttcttctatg acattaagtt cactggcatg aactttcctc ctcatggtcc agtgatgcag      420
agaaagacag taaaatggga gccatccact gaacgattgt atcttcgcga cgggtgtgctg      480
```

acgggacatg	acgacatgac	tctgcggggt	gaaggtggcc	gccatttgag	agttgacttt	540
aacacttctt	acatacccaa	gcactcgatc	aacatgccgg	atttccattt	tatagaccac	600
cgcattgaga	ttatggagca	tgacgaggac	tacaaccatg	tcaagctgcg	cgagtgtgct	660
gtagctcgct	attctctgct	gcctgagaag	aacaagggta	agcctatccc	taaccctctc	720
ctcggaactcg	attctacgcg	taccggttag				750

<210> 182
 <211> 249
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 182

Met	Ser	His	Ser	Lys	Ser	Val	Ile	Lys	Asp	Glu	Met	Phe	Ile	Lys	Ile
1				5					10					15	
His	Leu	Glu	Gly	Thr	Phe	Asn	Gly	His	Lys	Phe	Thr	Ile	Lys	Gly	Glu
			20					25					30		
Gly	Gly	Gly	Tyr	Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val
		35					40					45			
Val	Asn	Gly	Ala	Pro	Leu	Pro	Phe	Ser	Phe	Asp	Ile	Leu	Thr	Pro	Ala
	50					55					60				
Phe	Met	Tyr	Gly	Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro
65					70					75					80
Asp	Tyr	Phe	Lys	Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile
				85					90					95	
Met	Thr	Phe	Glu	Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	His	Ile	Arg
			100					105						110	
Met	Lys	Glu	Glu	Glu	Glu	Arg	His	Phe	Phe	Tyr	Asp	Ile	Lys	Phe	Thr
		115					120					125			
Gly	Met	Asn	Phe	Pro	Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val
	130					135					140				
Lys	Trp	Glu	Pro	Ser	Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu
145					150					155					160
Thr	Gly	His	Asp	Asp	Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Arg	His	Leu
				165					170					175	
Arg	Val	Asp	Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys	His	Ser	Ile	Asn	Met
		180						185						190	
Pro	Asp	Phe	His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp
	195						200					205			
Glu	Asp	Tyr	Asn	His	Val	Lys	Leu	Arg	Glu	Cys	Ala	Val	Ala	Arg	Tyr
	210					215					220				
Ser	Leu	Leu	Pro	Glu	Lys	Asn	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu
225					230					235					240
Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly							
				245											

<210> 183
 <211> 726
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 183

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atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc      60
gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggaac aaattttgta      120
aaacttgtag tgacgaaagg cgggcctctg ccgttttctt tcgatatatt gacaccagca      180
tttatgtatg gaaaccgtgt attcaccaaa tacccaaaag agataccaga ctatttcaag      240
cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta      300
tggtgcatca caagcgacat cagtgtgaaa ggtgactctt tcttctatga cattaagttc      360
actggcatga actttcctcc tcatgggtcca gtgatgcaga gaaagacagt aaaatgggag      420
ccatccactg aagtaatgta tggtgacgac aagagtgcag gtgtgctgaa gggagatgtc      480
aacatggctc tggtgcttaa agatggccgc catttgagag ttgactttaa cacttcttac      540
atacccaaga agaaggctga gaatatgcct gactaccatt ttatagacca ccgcattgag      600
attctgggca acccagaaga caagccggtc aagctgtacg agattgctac agctcgccat      660
catgggctga agggtaagcc tatccctaac cctctcctcg gactcgattc tacgcgtacc      720
ggttag                                     726

```

<210> 184

<211> 241

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 184

```

Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1          5          10          15
Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
 20          25          30
Pro Tyr Glu Gly Thr Asn Phe Val Lys Leu Val Val Thr Lys Gly Gly
 35          40          45
Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50          55          60
Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65          70          75          80
Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85          90          95
Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
100          105          110
Ser Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe Pro Pro His
115          120          125
Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu
130          135          140
Val Met Tyr Val Asp Asp Lys Ser Asp Gly Val Leu Lys Gly Asp Val
145          150          155          160
Asn Met Ala Leu Leu Lys Asp Gly Arg His Leu Arg Val Asp Phe
165          170          175
Asn Thr Ser Tyr Ile Pro Lys Lys Lys Val Glu Asn Met Pro Asp Tyr
180          185          190
His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys
195          200          205
Pro Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys
210          215          220
Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly Leu Asp Ser Thr Arg Thr
225          230          235          240
Gly

```

<210> 185

<211> 726
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 185
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggaac acagacttta 120
 catcttacag agaaggaagg caagcctctg acgttttctt tcgatgtatt gacaccacaa 180
 ttacagtatg gaaacaagtc attcgtcagc taccctaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaagcattc cttttcaaga ccaggcctca 300
 tgtaccgtca caagccacat caggatgaaa gaggaagagg agcggcattt cttctatgac 360
 attaagttca ctggcatgaa ctttcctcct catgggtccag tgatgcagag aaagacagta 420
 aaatgggagc catccactga aaacatttat cctcgcgacg aattttctgga gggacatgac 480
 gacatgactc tgcgggttga aggtggccgc catttgagag ttgactttaa cacttcttac 540
 atacccaaga agaaggtcga gaatatgcct gactaccatt ttatagacca ccgcattgag 600
 attctgggca acccagaaga caagccggtc aagctgtacg agattgctac agctcgccat 660
 catgggctga agggtaagcc tatccctaac actctcctcg gactcgattc tacgcgtacc 720
 ggtag 726

<210> 186
 <211> 241
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 186
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Thr Gln Thr Leu His Leu Thr Glu Lys Glu Gly Lys
 35 40 45
 Pro Leu Thr Phe Ser Phe Asp Val Leu Thr Pro Gln Leu Gln Tyr Gly
 50 55 60
 Asn Lys Ser Phe Val Ser Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ser Ile Pro Phe Gln
 85 90 95
 Asp Gln Ala Ser Cys Thr Val Thr Ser His Ile Arg Met Lys Glu Glu
 100 105 110
 Glu Glu Arg His Phe Phe Tyr Asp Ile Lys Phe Thr Gly Met Asn Phe
 115 120 125
 Pro Pro His Gly Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro
 130 135 140
 Ser Thr Glu Asn Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly His Asp
 145 150 155 160
 Asp Met Thr Leu Arg Val Glu Gly Gly Arg His Leu Arg Val Asp Phe
 165 170 175
 Asn Thr Ser Tyr Ile Pro Lys Lys Lys Val Glu Asn Met Pro Asp Tyr
 180 185 190
 His Phe Ile Asp His Arg Ile Glu Ile Leu Gly Asn Pro Glu Asp Lys
 195 200 205

Pro Val Lys Leu Tyr Glu Ile Ala Thr Ala Arg His His Gly Leu Lys
 210 215 220
 Gly Lys Pro Ile Pro Asn Thr Leu Leu Gly Leu Asp Ser Thr Arg Thr
 225 230 235 240
 Gly

<210> 187
 <211> 714
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 187
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggagggcgc tgttaacggc 60
 caccacttta cgatcaaagg ggaaggagga ggataccctt acgaaggaac acagacttta 120
 catcttacag agaaggaagg caagcctctg ccgttttctt tcgatataatt gacaccagca 180
 tttatgtatg gaaaccgtgt attcaccaaa taccctaaaag agataccaga ctatttcaag 240
 cagacctttc ctgaaggcta tcaactgggag cgaataatga cttttgagga cgggggcgta 300
 tgttgcatca caagcgacat cagtgtgaaa ggtgactctt tctactataa gattcacttc 360
 actggcgagt ttctctctca tgggtccagt atgcagagaa agacagtaaa atgggagcca 420
 tccactgaaa acatttatcc tcgcgacgaa tttctggagg gagatgtcaa catggctctg 480
 ttgcttaaag atggccgcca tttgagagtt gactttaaca cttcttacat acccaagaag 540
 aaggtcgaga atatgcctga ctaccatttt atagaccacc gcattgagat tctgggcaac 600
 ccagaagaca agccgggtcaa gctgtacgag attgctacag ctcgccatca tgggctgaag 660
 ggtaagccta tccctaacct tctctctgga ctcgattcta cgcgtaccgg ttag 714

<210> 188
 <211> 237
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 188
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Glu Gly
 1 5 10 15
 Ala Val Asn Gly His His Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Thr Gln Thr Leu His Leu Thr Glu Lys Glu Gly Lys
 35 40 45
 Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Met Tyr Gly
 50 55 60
 Asn Arg Val Phe Thr Lys Tyr Pro Lys Glu Ile Pro Asp Tyr Phe Lys
 65 70 75 80
 Gln Thr Phe Pro Glu Gly Tyr His Trp Glu Arg Ile Met Thr Phe Glu
 85 90 95
 Asp Gly Gly Val Cys Cys Ile Thr Ser Asp Ile Ser Val Lys Gly Asp
 100 105 110
 Ser Phe Tyr Tyr Lys Ile His Phe Thr Gly Glu Phe Pro Pro His Gly
 115 120 125
 Pro Val Met Gln Arg Lys Thr Val Lys Trp Glu Pro Ser Thr Glu Asn
 130 135 140
 Ile Tyr Pro Arg Asp Glu Phe Leu Glu Gly Asp Val Asn Met Ala Leu

145		150		155		160									
Leu	Leu	Lys	Asp	Gly	Arg	His	Leu	Arg	Val	Asp	Phe	Asn	Thr	Ser	Tyr
		165		170		175									
Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp	Tyr	His	Phe	Ile	Asp
		180		185		190									
His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val	Lys	Leu
		195		200		205									
Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys	Pro	Ile
		210		215		220									
Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly			
225				230		235									

<210> 189

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 189

atgaagggg	tgaaggaagt	aatgaagatc	agtctggaga	tggactgcac	tgttaacggc	60
gacaaattta	cgatcaaagg	ggaaggagga	ggataccctt	acgaaggagt	acagtttatg	120
tctcttgaag	tggtgaatgg	cgcgcctctg	acgttttctt	tcgatgtatt	gacaccagca	180
tttatgtatg	gaaaccgtgt	attcaccaaa	tacccaaaag	agataccaga	ctatttcaag	240
cagacctttc	ctgaaggcta	tactgggag	cgaataatga	cttttgagga	cgggggcgta	300
tggtgcatca	caagcgacat	cagtgtgaaa	ggtgactctt	tctactataa	gattcacttc	360
actggcgagt	ttcctcctca	tggtccagt	atgcagagaa	agacagtaaa	atgggagcca	420
tccactgaag	taatgtatgt	tgacgacaag	agtgcggtg	tgctgaagg	agatgtcaac	480
atggctctgt	tgcttaaaga	tggcggccat	tacacatgtg	tctttaaaac	tatttacaga	540
tccaagcact	cgatcaacat	gccggatttc	cattttatag	accaccgcat	tgagattctg	600
ggcaaccag	aagacaagcc	ggtcaagctg	tacgagattg	ctacagctcg	ccatcatggg	660
ctgaagggta	agcctatccc	taaccctctc	ctcggactcg	attctacg	taccggttag	720

<210> 190

<211> 239

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 190

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5					10					15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20						25					30		
Pro	Tyr	Glu	Gly	Val	Gln	Phe	Met	Ser	Leu	Glu	Val	Val	Asn	Gly	Ala
		35					40					45			
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Ala	Phe	Met	Tyr	Gly
		50				55					60				
Asn	Arg	Val	Phe	Thr	Lys	Tyr	Pro	Lys	Glu	Ile	Pro	Asp	Tyr	Phe	Lys
		65			70				75					80	
Gln	Thr	Phe	Pro	Glu	Gly	Tyr	His	Trp	Glu	Arg	Ile	Met	Thr	Phe	Glu
			85					90					95		
Asp	Gly	Gly	Val	Cys	Cys	Ile	Thr	Ser	Asp	Ile	Ser	Val	Lys	Gly	Asp
			100					105					110		

Ser	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu	Phe	Pro	Pro	His	Gly
	115						120					125			
Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu	Pro	Ser	Thr	Glu	Val
	130					135					140				
Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly	Val	Leu	Lys	Gly	Asp	Val	Asn
145					150					155					160
Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Gly	His	Tyr	Thr	Cys	Val	Phe	Lys
			165					170						175	
Thr	Ile	Tyr	Arg	Ser	Lys	His	Ser	Ile	Asn	Met	Pro	Asp	Phe	His	Phe
		180						185					190		
Ile	Asp	His	Arg	Ile	Glu	Ile	Leu	Gly	Asn	Pro	Glu	Asp	Lys	Pro	Val
	195						200					205			
Lys	Leu	Tyr	Glu	Ile	Ala	Thr	Ala	Arg	His	His	Gly	Leu	Lys	Gly	Lys
	210					215					220				
Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly	Leu	Asp	Ser	Thr	Arg	Thr	Gly	
225					230				235						

<210> 191

<211> 408

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 191

atgaaagagg	aagaggagcg	gcattttctac	tataagattc	acttcactgg	cgagtttctc	60
cctcatggtc	cagtgatgca	gagaaagaca	gtaaaatggg	agccatccac	tgaagtaatg	120
tatgttgacg	acaagagtga	cggtgtgctg	aaggagatg	tcaacatggc	tctgttgctt	180
aaagatggcg	gccattacac	atgtgtcttt	aaaactat	acagatccaa	gcactcgatc	240
aacatgccgg	atttccattt	tatagaccac	cgcattgaga	ttatggagca	tgacgaggac	300
tacaaccatg	tcaagctgcg	cgagattgct	acagctcgcc	atcatgggct	gaagggtaag	360
cctatcccta	accctctcct	cggactcgat	tctacgcgta	cgggttag		408

<210> 192

<211> 135

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetically generated

<400> 192

Met	Lys	Glu	Glu	Glu	Glu	Arg	His	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr
1				5					10					15	
Gly	Glu	Phe	Pro	Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys
			20					25					30		
Trp	Glu	Pro	Ser	Thr	Glu	Val	Met	Tyr	Val	Asp	Asp	Lys	Ser	Asp	Gly
		35				40						45			
Val	Leu	Lys	Gly	Asp	Val	Asn	Met	Ala	Leu	Leu	Leu	Lys	Asp	Gly	Gly
	50					55					60				
His	Tyr	Thr	Cys	Val	Phe	Lys	Thr	Ile	Tyr	Arg	Ser	Lys	His	Ser	Ile
65					70				75					80	
Asn	Met	Pro	Asp	Phe	His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu
			85					90					95		
His	Asp	Glu	Asp	Tyr	Asn	His	Val	Lys	Leu	Arg	Glu	Ile	Ala	Thr	Ala
			100					105					110		

Arg His His Gly Leu Lys Gly Lys Pro Ile Pro Asn Pro Leu Leu Gly
 115 120 125
 Leu Asp Ser Thr Arg Thr Gly
 130 135

<210> 193
 <211> 327
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 193
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggagt acagtttatg 120
 tctcttgaag tggatgaatgg cgcgcctctg ccgttttctt tcgatatatatt gacaccagca 180
 tttcagtatg gaaaccgtac attcaccaaa taccagccga tataccagac tatatcaagc 240
 tgtcctttcc tgagggtctt acctgggagc gaagcattcc ttttcaagac caggcctcat 300
 gtaccgtcac aagccacatc aggatga 327

<210> 194
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 194
 Met Lys Gly Val Lys Glu Val Met Lys Ile Ser Leu Glu Met Asp Cys
 1 5 10 15
 Thr Val Asn Gly Asp Lys Phe Thr Ile Lys Gly Glu Gly Gly Gly Tyr
 20 25 30
 Pro Tyr Glu Gly Val Gln Phe Met Ser Leu Glu Val Val Asn Gly Ala
 35 40 45
 Pro Leu Pro Phe Ser Phe Asp Ile Leu Thr Pro Ala Phe Gln Tyr Gly
 50 55 60
 Asn Arg Thr Phe Thr Lys Tyr Gln Pro Ile Tyr Gln Thr Ile Ser Ser
 65 70 75 80
 Cys Pro Phe Leu Arg Ala Leu Pro Gly Ser Glu Ala Phe Leu Phe Lys
 85 90 95
 Thr Arg Pro His Val Pro Ser Gln Ala Thr Ser Gly
 100 105

<210> 195
 <211> 327
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 195
 atgaaggggg tgaaggaagt aatgaagatc agtctggaga tggactgcac tgttaacggc 60
 gacaaattta cgatcaaagg ggaaggagga ggataccctt acgaaggaac acagacttta 120
 catcttacag agaaggaagg caagcctctg acgttttctt tcgatgtatt gacaccacaa 180

ttacagtatg gaaacaagtc attcgtcagc taccagccg atataccaga ctatatcaag	240
ctgtccttcc tgagggcttt acctgggagc gaagcattcc ttttcaagac caggcctcat	300
gtaccgtcac aagcgacatc agtatga	327

<210> 196
 <211> 108
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 196

Met	Lys	Gly	Val	Lys	Glu	Val	Met	Lys	Ile	Ser	Leu	Glu	Met	Asp	Cys
1				5				10						15	
Thr	Val	Asn	Gly	Asp	Lys	Phe	Thr	Ile	Lys	Gly	Glu	Gly	Gly	Gly	Tyr
		20					25					30			
Pro	Tyr	Glu	Gly	Thr	Gln	Thr	Leu	His	Leu	Thr	Glu	Lys	Glu	Gly	Lys
		35				40					45				
Pro	Leu	Thr	Phe	Ser	Phe	Asp	Val	Leu	Thr	Pro	Gln	Leu	Gln	Tyr	Gly
	50				55					60					
Asn	Lys	Ser	Phe	Val	Ser	Tyr	Pro	Ala	Asp	Ile	Pro	Asp	Tyr	Ile	Lys
65				70				75						80	
Leu	Ser	Phe	Leu	Arg	Ala	Leu	Pro	Gly	Ser	Glu	Ala	Phe	Leu	Phe	Lys
			85					90					95		
Thr	Arg	Pro	His	Val	Pro	Ser	Gln	Ala	Thr	Ser	Val				
		100					105								

<210> 197
 <211> 408
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 197

atgaaaagta acaactgttt ctactataag attcacttca ctggcgagtt tcctcctcat	60
ggtccagtga tgcagagaaa gacagtaaaa tgggagccat ccactgaacg attgtatctt	120
cgcgacggtg tgctgacggg acatgacgac atgactctgc gggttgaagg tggccgccat	180
ttgagagttg actttaacac ttcttacata cccaagaaga aggtcgagaa tatgcctgac	240
taccatttta tagaccaccg cattgagatt atggagcatg acgaggacta caaccatgtc	300
aagctgcgcg agtgtgctgt agctcgctat tctctgctgc ctgagaagaa caagggtaag	360
cctatcccta accctctcct cggactcgat tctacgcgta ccggttag	408

<210> 198
 <211> 135
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetically generated

<400> 198

Met	Lys	Ser	Asn	Asn	Cys	Phe	Tyr	Tyr	Lys	Ile	His	Phe	Thr	Gly	Glu
1				5					10					15	
Phe	Pro	Pro	His	Gly	Pro	Val	Met	Gln	Arg	Lys	Thr	Val	Lys	Trp	Glu

			20					25					30				
Pro	Ser	Thr	Glu	Arg	Leu	Tyr	Leu	Arg	Asp	Gly	Val	Leu	Thr	Gly	His		
		35					40					45					
Asp	Asp	Met	Thr	Leu	Arg	Val	Glu	Gly	Gly	Arg	His	Leu	Arg	Val	Asp		
	50					55					60						
Phe	Asn	Thr	Ser	Tyr	Ile	Pro	Lys	Lys	Lys	Val	Glu	Asn	Met	Pro	Asp		
65					70					75					80		
Tyr	His	Phe	Ile	Asp	His	Arg	Ile	Glu	Ile	Met	Glu	His	Asp	Glu	Asp		
			85					90						95			
Tyr	Asn	His	Val	Lys	Leu	Arg	Glu	Cys	Ala	Val	Ala	Arg	Tyr	Ser	Leu		
			100					105						110			
Leu	Pro	Glu	Lys	Asn	Lys	Gly	Lys	Pro	Ile	Pro	Asn	Pro	Leu	Leu	Gly		
		115					120					125					
Leu	Asp	Ser	Thr	Arg	Thr	Gly											
	130					135											